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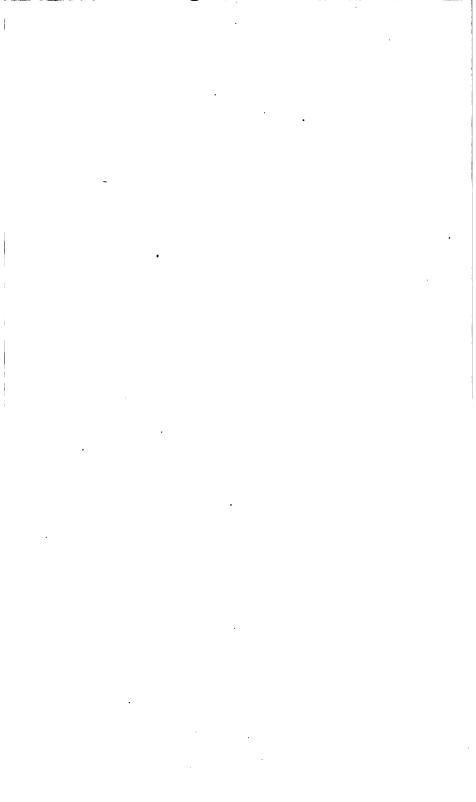


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THE MAGAZINE

OF

HORTICULTURE

BOTANY,

AND ALL USEFUL DISCOVERIES AND IMPROVEMENTS IN

RURAL AFFAIRS.

"Je voudrais échausser tout l'univers de mon gout pour les jardins. Il me semble qu'il est impossible qu'un méchant puisse l'avoir. Il n'est point de vertus que je ne suppose à celui que aime à perler et à faire des jardins. Péres de famille, inspirez la jardinomanie à vos ensans."—Prince de Ligne.

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AUTHOR OF THE "FRUITS OF AMERICA."

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No. CCCLXI.

JANUARY, 1865.

EDITED BY C. M. HOVEY,

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RONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFORD, WORCESTER, ROCHESTER, BUFFALO, CLEVELAND, WILMINSTON, RTC. ETC.

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BUSH APPLE TREES.

WE have, in our previous volumes, directed the attention of our readers to the importance of the introduction of Dwarf Apple Trees into our gardens, and strongly urged their more extensive culture, both in large and small collections of fruit. But either from the fact, that apples are usually abundant and cheap in our market, or that dwarf apples are considered unprofitable objects, they have not yet obtained that prominent place which they fully deserve in the fruit garden. Dwarf pears have plenty of advocates, but the apple seems to have been almost entirely overlooked.

Many years ago Mr. Rivers, the well-known cultivator, published an article on the growth of dwarf apples, which he designated the "Miniature Fruit Garden," and from that period up to the present time, nearly forty years, he has not only continued to cultivate the trees, but has published a small volume entitled the "Miniature Fruit Garden," the 12th edition of which has recently appeared, containing additional experience acquired in the culture of these trees, which he now calls "Bush Apple Trees," from the facility with which they are made to assume the bush form, and at the same time yield abundant and profitable crops of fruit.

The culture of these dwarf trees is yet very limited in our country, and it is only within a few years that they have attracted any attention; but as they become better known, and their real value appreciated, they will, we are sure, be considered almost as indispensable as the pear. They are less particular as to soil than the pear, grow quite as readily, occupy but little more space than a currant bush, and bear three to six dozen of large and beautiful fruit each. Besides this, they are so completely within the control of the cultivator, that if the canker worm attacks the trees, they can easily be destroyed by the application of whale oil soap. Now that this pest is so destructive to orchard trees, the bush apples will supply their place, and the same ground, covered with a

dozen or two trees, will produce nearly the same quantity as a standard, and much larger and more beautiful fruit.

We have a large and fine collection of dwarf trees, and it is our intention to devote considerable space to the dissemination of information which will lead to their more extensive culture; but as we are not quite prepared to give the result of our experience, we avail ourselves just now of a short extract from Mr. Rivers's last edition, showing how easily these bush trees may be grown, and the probable supply of fruit they will afford:—

"I have reason to think," observes Mr. Rivers, "that a great change may be brought about in suburban fruit culture by these bush trees. I have shown how bush pears on quince stocks may be cultivated. Pears are, however, a luxury; apples and plums are necessaries to the families of countless thousands who live in the vicinity of our large populous towns and cities; and a new chapter of the Miniature Fruit Garden is therefore devoted to an explanation of the manner in which apples may be grown on bushes on the paradise stock. There is this, too, in addition to the question of profitableness, which may be urged in favor of bush-formed trees, that some good sorts which are not exactly tractable when the pyramid form is imposed upon them, are yet manageable enough under the less formal character of bushes, and such are exceedingly well adapted for small gardens.

The treatment of these bush trees is very simple, and the return, if they are judiciously managed, certain. First of all it is to be remembered that the trees are to be worked on the paradise stock, and like other fruit trees, are all the better for going through a preparatory course of treatment in the nursery quarters. Trees of two or three years old are those recommended to be used, and such, if the preparation has been judicious, may be expected to commence bearing the first season after planting. The space originally allotted to them should be three feet from row to row, and three feet in the row, for ordinary sorts; but for large growers, such as Bedfordshire Foundling, a space of four feet should be allowed. When the trees have grown so as nearly to touch

each other, every alternate one should be removed—these being available for another plantation—so that they may stand four and a half feet apart in quincunx order, the formula for accomplishing which is to take away all the trees represented by odd numbers in the first and third rows, and those represented by even numbers in the second and fourth, and so on alternately, or vice versa. The larger growers are to be thinned out upon the same plan. After the lapse of 16 or 20 years the trees of every alternate row must be taken away, and planted elsewhere.

Then as to the summer treatment of these trees, the principal feature is the assiduous carrying out of the mode of pruning denominated 'summer pinching,' which consists in regularly, from the beginning of June to the end of August, pinching or nipping off the end of every shoot 'as soon as it has made five or six leaves, leaving from three to four full-sized ones;' or if the leaves are very thickly placed, as they are on some varieties, the rule may be to leave the shoots at from $3\frac{1}{2}$ to 4 inches in length.

If it should happen that from the favorable condition or fertility of the soil, the trees are inclined to grow too vigorously, the cure is to remove them biennially, or rather to cut their roots, the plan Mr. Rivers recommends being to dig a circular trench 1 foot from the stem of the tree, and introducing the spade under its roots to heave it up so as to detach them all from the soil; then to fill in the earth dug from the trench, and tread it gently on to the roots. If the 'pinching in' suffices to moderate the vigor of the trees, and a state of healthful fertility is induced by this treatment alone, then the transplanting or root-cutting may be deferred for a longer period.

A plantation of bush apple trees ought to be remunerative, and Mr. Rivers instances his own plot of 100 trees of Cox's Orange Pippin, planted in the spring of 1862, which bore a fine crop of most beautiful fruit in 1863, and an almost overabundant one in the present year. These trees, which are on the paradise stock, 'will this season, the third of their growth in their present quarters, and the fourth of their age, give an average of a quarter of a peck from each tree, so

that we might have from 4840 trees, growing on one acre of ground, 302 bushels of fine apples, which even this abundant season would be (if Cox's Orange) worth 5s. per bushel, or 75l. In 1866, the trees, then averaging half a peck each, would double this sum, and make an acre of apple trees a very agreeable and eligible investment.' And that his readers may feel satisfied he is not theorising, but deducing facts from a sound basis, Mr. Rivers points out that besides his plantation of Cox's Orange Pippin, he has another, consisting of 400 bush trees, which has been in existence for upwards of 10 years, so that he may be accredited with ample experience of the subject.

Some further illustrations of this mode of cultivating apples in its bearing on the future may be briefly referred to. Let us suppose, with our mentor, 'a rood of ground planted as described, with 1210 bush apple trees. In the course of eight or ten years half of these, or 605, may be removed to a fresh plantation, in which they may be planted six feet apart; they will at once occupy half an acre of ground. At the end of 16 or 18 years, every alternate row of trees in the first plantation, the rood, will require to be removed, which will give 302 to be planted six feet apart, leaving 303 on the original rood. The 1210 trees will by this time occupy one acre of ground at six feet apart. With proper summer pruning or pinching they will not require any further change, but continue to grow and bear fruit as long as they are properly cultivated. The great advantage reaped by the planter is the constant productiveness of his trees: from the second year after planting they will be always "paying their way." The unprejudiced fruit cultivator will quickly find out the great advantage of my mode of apple and pear cultivation.'

These pictures are tempting enough, we imagine, to set us all planting bush apple trees. That it is a very interesting as well as a profitable mode of culture seems unquestionable, that it is especially suited for the small gardens of amateurs is certain, and that it offers a very ready means of obtaining good samples of the choicer sorts of this most useful of fruits, and of securing a crop, too, from the ready manner in which protection might, if necessary, be afforded, is equally beyond doubt."

ISOLA BELLA AND ISOLA MADRE.

BY H. H. HUNNEWELL, ESQ.

WE left Turin on a beautiful morning for Arona, on Lake Margiore, where we arrived after some four hours' ride by the railroad, having had the Alps, covered with snow, in full view all the time. There we took a small steamboat, and after a short hour's sail were landed on the Isola Bella, one of the celebrated Borromean Islands, which it would seem was, some two hundred years ago, very much like Egg Rock. at Nahant; the ancestor of the present Count Borromeo having commenced his improvements in 1670, transforming the barren rock into one of the most elaborate and curious, if not interesting, examples of the artificial style of Italian The southerly side, which we saw first, presents a most striking and theatrical effect, being composed of ten stone terraces, raised one above the other to the height of ninety-two feet above the level of the lake, their sides showing one mass of foliage, being covered with orange and lemon trees, trained en espalier, and the parapets decorated with towers, fountains and statuary, in great profusion. From the upper terrace, which is very large, you look down upon the gay parterres below, the groves of orange trees. Magnolia grandifloras, and rare trees and plants of every description, with the beautiful lake, surrounded by mountains, including the Simplon, offering altogether one of the most enchanting views imaginable. The palace, at the opposite end of the island, has no architectural attractions whatever, but is very large, and the apartments are very lofty, in almost regal style, and are decorated with some valuable paintings. We were shown a chamber occupied by Napoleon I., who passed a night there just previous to the battle of Marengo. and a large laurel tree in the gardens, in the back of which he cut the word "Battaglia." The labor and expense in cutting out the terraces in the solid rock, the construction of rockeries, grottoes, innumerable steps, porticos, walls, &c., are almost incredible with modern notions, to say nothing of the transportation of materials and the great quantity of

soil required, every shovelful of which was carried there. But there is another island, still more interesting, belonging to the same family, which went through pretty much the same process, called the Isola Madre, about one mile off, to which we were rowed in a small boat, and which, being larger, some eight or ten acres, I should think, is treated more after the English style of landscape gardening, and is much more pleasing. Imagine my astonishment on approaching it, to see the shore, which, on one side, is bold and rocky, covered with any quantity of aloes as large again as ours, yuccas, enormous cactus, palms, and numerous other exotic plants, growing wild, as it were, among the rocks, and, what I had never seen, one of the aloes had blossomed this summer, and though the flower had faded, the stalk remained some ten or twelve feet high! After going up some twenty or thirty steps cut in the rock, we reached a terrace, where the first thing that caught my eye was a little hedge of the pretty cotoneaster, with its small, bright, shining leaves and scarlet berries. A few minutes more and I was standing before a Cedar of Lebanon half as large again as that in the "Jardin des Plantes" in Paris. I turned around and was inclined to drop on my knees before a lovely weeping juniper, some fifteen feet high. Then I recognized one of my favorite rhododendrons, as large as a small load of hay, and as I approached nearer to it, almost out of breath with wonder and admiration, what should start out of its branches but half a dozen pheasants, (the island is full of pheasants and partridges,) which about finished me for a moment. On examination I found the trunk was some twelve inches in circumference: to have counted the buds on it would have required the whole winter! To enumerate all the rare trees and shrubs which incited my attention would require many pages; a great many I never saw before; some, twenty or thirty feet high, I recognized as having seen in our greenhouses in sixinch pots. The Ligustrum japonica, which I supposed a shrub, I found was here a medium-sized tree, and a beautiful one it was; and so camellias, cleanders, pomegranates, arbutus, myrtle, hollies, laurels, and the mespilus, the latter in full blossom, were good-sized trees; fuchias, heliotropes,

&c., large shrubs. Evergreen trees and shrubs were so numerous, and the grass so green, with roses and many plants still in blossom, that one could hardly believe it was not the middle of the summer, instead of near December! A Juniperus sabina, trailing on the lawn, was a beauty in form and luxuriance, requiring some forty paces to go around it. Another on the slope of a hill, covered many hundred feet of surface. There were Deodar cedars of all sizes, up to thirty feet or more; enormous Taxodiums sempervirens; large Piceas pichtas, Pinsapos, very handsome, and taxifolias; Araucarias, imbricata and braziliensis, also the excelsa, which, from having made its growth in the open air, was more stocky and much handsomer than any I ever saw before. This requires the protection of glass in winter. Then there were Cunninghamias sinensis, twenty-five feet high; Cryptomeria japonica and Thuja nepalensis, twenty feet: Abies Smithiana, fifteen feet: Cephalotaxus Fortunii. same; and lots of Cupressus, which were lovely beyond description, such as Cupressus funebris, torrulosa, excelsa, glauca, gracilis, and a Himalayan pine ten to thirty feet, with the horizontalis and pyramidalis, which you see in every direction, the latter pointed sharp as a needle, and as straight and compact as if grown in a mould, and to a great height; Pinus palustris, patula and excelsa, fifteen feet high, with small specimens of Pinus macrophylla, Montezuma, filifolia, Cupressus Lawsoniana, Thujopsis borealis, Washingtonia, &c. With only five or six degrees of frost, which the gardener told me was as cold as they ever have it here in this favored spot, very few things require any protection. Over the orange trees, which are under the terraces, temporary sheds are erected, and straw caps, supported by stakes, are placed over some of the most tender plants. I was amused to see one over a Mahonia japonica, a sturdy fellow who does not flinch with the thermometer 20° below zero at Wellesley.

With all the beautiful and rare trees I have mentioned, some as single specimens on the lawn, some in groups, with walks winding about in every direction, occasionally leading to a beautiful view on the lake, with the sun setting on the tops of the mountains, covered with snow, you can form some

idea of what a fairy land this little island must be, and what a delightful afternoon I passed, and evening, I might add, for it was after dark before we took our seats in the boat to return to the Isola Bella, where there has been a hotel built, (a great blemish it is to the place,) where we passed the night, leaving next morning before daylight, fortunately to catch the boat, for it would have been no easy matter for me to go off with such attractions before my eyes, even with Lakes Lugano and Como for my destination! And so ends our visit to the Borromean Islands.

FUNGUS ON PEARS.

BY J. S. HOUGHTON, PHILADELPHIA.

It is now pretty generally conceded, we believe, that the unsightly black spots which are so frequently seen on the surface of pears and apples are caused by a parasitic fungus. The celebrated writer on this subject, Rev. M. J. Berkley of England, calls it the Cladosporium dentriticum, though, so far as most of us are concerned, he might christen it with any other formidable scientific title, and leave us just as wise as we are at present, with the above mysterious cognomen. Mr. Berkley says, however, that the spots have in the first instance undoubtedly originated in the growth beneath the real cuticle, and thus destroyed the vitality of the subjecent After a time, the cuticle bursts, to allow the fertile threads to break out into the air, and bear fruit. is no reason to suppose, he continues, that this fungus is a new visitant, as some kinds of apples have always been subject to this spotting. But he thinks it is far more prevalent than it was 30 years ago, and the discovery of an effectual remedy would be a great benefit to horticulturists.

One idea suggests itself, as a means of defence against this pest, and that is to gather and destroy the affected fruit before the fungus arrives at maturity, and its "fertile threads," or spawn, are capable of reproducing the injurious disease.

Or, is the fungus produced spontaneously by an imperfect organization of tree and fruit, or by the action of soils and manures, by excess of moisture, or by drouth?

Almost all the theories that can be set up are controverted by abundant facts.

If you say that the fungus is due to an arid soil, I will show you pear trees growing in a very moist, protected spot, in a famous garden in Germantown, near Philadelphia, with an entire crop of fruit, annually blackened and spotted with fungi so as to be entirely worthless.

If you say that it is excess of moisture at the roots, I will show you the fungus on high, sweet soil, sub-soiled and under-drained.

If you say it is excessive heat of climate which produces the fungus, I may reply that it prevails in the moist, cool climate of England,—while the fairest fruit ever seen in America is produced, free from fungus, in the comparatively hot, arid climate of Delaware and Maryland.

Not all varieties of pears are affected alike with us, or in one orchard or garden. The Louise Bonne de Jersey, which almost everywhere is grown fair, and free from fungus, is with me, especially, the subject of this pest. I fancied that this was in some degree caused by excess of crop, and want of moisture at the roots, and I moved about thirty large dwarf trees from high and somewhat dry ground, and planted them alongside of a surface drain, on a cool western exposure, together with some White Doyenné, similarly affected. The first season after removal, these trees were permitted to bear a little, but no marked improvement, as to the presence of fungus, was exhibited by the fruit.

In city gardens, it is believed, that pears are less frequently affected by fungus than in the open fields, in the country. Protection against dry currents of air, has been thought to be of service in the production of fruit free from fungus. But, is it so?

If you assert that the best hope of immunity from this pest is to be found in healthy, vigorous trees, either in cultivated soil, or in grass, I will show you the dreaded spots on trees with trunks shining like polished rosewood, making new shoots three feet long every season, and standing in either cultivated gardens, or in grass, just as you prefer to see them.

Now, how shall we escape from this fungus? It is a serious and important question, and it is one that ought to be discussed in our horticultural journals, in order to ascertain if anybody can obtain fruit free from fungus, and the conditions of soil, climate, manuring, mulching or no mulching, protection or no protection, under which it is found to be produced.

POMOLOGICAL GOSSIP.

AMERICAN PEACHES IN ENGLAND.—Our correspondent Mr. Rivers, the well-known active and intelligent nurseryman of Sawbridgeworth, England, gives a very interesting account of the several French and American peaches which he has fruited in his large collection of orchard-house trees. We only regret that he has marred his otherwise excellent paper by alluding to the States of North America as "a country which will one day have as many 'principalities and powers' as formerly had India!" We say we regret this, for we have a great esteem for Mr. Rivers, and believed him one of those who sympathized with the late lamented Loudon, in our republican principles and great progress as a nation.

Among the American peaches he has had, he considers the Early Crawford and Yellow Rareripe as two of the best yellow-fleshed sorts, fine in orchard-houses, but comparatively worthless in the cold, damp, open-air climate of England. Crawford's Late was good, Bergen's Yellow large and good. Mr. Rivers considers all our yellow peaches varieties of the "Admirable Jaune."

THE ADIRONDAC AS A WINE GRAPE.—Much has been said of the merits of various new grapes for wine. Some have been pronounced unfit for the purpose, and others eulogized as superior to all the rest. The Concord and Delaware both have a high reputation for their wine-making properties, and now we have the evidence of a thorough wine manufacturer that the Adirondac is superior to all. The following letter

will tell its own story. It is addressed to Mr. J. W. Bailey, of Plattsburg, N. Y.:—

Dear Sir:—Your favor of the 7th was received through due process of mail, but the answer was deferred in order to give an opportunity of examining the sample of wine made from your Adirondac grapes. It had not passed through the first fermentation at the time. Our foreman racked it off today and placed it in bottles. There were four and a half (41) bottles, and we have this day shipped by express to you two (2) bottles. The grapes came to us in very bad order, and the sample being small, we do not regard the experiment a fair one, but Mr. J. F. Weber (our foreman) thinks the sample fully 25 per cent. better than the best Diana, which is thought to be superior to any other kind we have tried. I am of the opinion that the Adirondac promises to be a superior wine grape, having all the requisite qualities necessary to make one of the finest flavored wines ever made in America.

I think it would pay you well to raise enough of them to make a cask of wine, so that the public may have an opportunity of seeing wine made from the Adirondac, and under reasonably favorable circumstances. It is impossible to make a fine wine in small quantities.

You will please accept the best wishes of the P. V. Wine Co., and also the especial regards of your friend G. H. Wheeler, Hammondsport, N. Y., Nov. 29, 1864.

KEELE HALL BUERRE PEAR.—A pear said to be new, has been described under this name by Mr. R. Thompson, in the Gardeners' Chronicle. The specimens were raised by Mr. W. Hill, of Keele Hall, who gives the following account of it:—"I send you specimens of the (with us) excellent pear called the Styrian, from a south wall. The fruit is smaller this year than usual, owing, no doubt, to the dry season. We find it very useful, as it comes in just before Marie Louise, Louise Bonne de Jersey, &c. I am surprised to find this variety so little known. I never met with a gardener who knew it, nor can our principal nurserymen supply it. In the Gardeners' and Foresters' Record, (Vol. 1 for 1842,) may be found a very poor figure of it, with the following description:—'This

is a new and very scarce kind. The tree is a most excellent bearer, and will be found to answer as a standard in warm situations, but better as a wall tree. The fruit is juicy, sweet and melting. It is a fine variety, in use from October to December.' I find its season with us is all through October, not later. By grafting on Citron des Carnes, I have it ripe in September, at least a fortnight to three weeks sooner than on the pear stock. We also find it one of the very few standards that succeed in this climate—anything but favorable to standard pears generally."

To this Mr. Thompson adds: "The fruit received from Mr. Hill was large, pyramidal, and broad at the top; stalk about 11 inch long, thick and fleshy at its junction with the fruit; skin smooth, yellow, bright red next the sun; flesh yellowishwhite, melting, buttery, sugary, and very good. pear as that grown by Mr. Hill was undoubtedly figured under the name of Styrian, in the Gardeners' and Foresters' Record for 1833. It is not, however, the Styrian which was first received in this country by the Horticultural Society, from M. Bosc, of Paris, before 1824. The latter had a long, tapering form, and a beautiful bright red color next the sun, and indeed nearly all over the fruit; the flesh is, moreover, not so melting as it is in this sort. Hence, as the pear now figured, which was found at Keele Hall by Mr. Hill on entering his situation fifteen years ago, and deserves to be more extensively grown, has not hitherto been identified with any known variety, the name of Keele Hall Buerre may, we think, be appropriately adopted."

We give the above account entire, because we believe the variety to be the old Styrian pear of American collections, which we have fruited for twenty years, Mr. Hill's description and the figure exactly corresponding. It is a very variable sort, sometimes pyriform, and again quite obtuse; sometimes most excellent, and again only of medium quality. A full description and figure of it will be found in a former volume (xvi., p. 342). We had a bushel or more of the pears last year, and they were handsome and good.

PITMASTON DUCHESSE D'ANGOULEME PEAR.—This is the unfortunate name given to a new pear raised by the late

John Williams, Esq., of Pitmaston, who has produced several varieties of fruits, mostly called by the names of their parents, and thus leading to confusion. He raised the *Pitmaston* White Sweetwater grape, the *Pitmaston* Orange nectarine, and the *Gansell's* Seckel pear, and now we have the *Pitmaston* Duchess pear. Mr. Thompson thus describes it in the Gardeners' Chronicle:

Fruit very large, 4½ inches long and 3½ in diameter; oblong-obovate; stalk short, obliquely attached, projecting more on one side than the other: eve in a moderate-sized depression, with the segments of the calvx erect and projecting to the level of the fruit; skin soft, smooth, vellow, with thin light russet near the stalk; flesh yellowish white, exceedingly melting, buttery, very juicy and rich. Mr. Stevens, gardener to F. E. Williams, Esq., of Malvern Hill, Solihall, by whom the fruit of this pear has been sent, informs us that it is a seedling of the late John Williams, Esq., of Pitmaston, in 1841, and is a cross between the Duchess and Glout Morceau. Mr. Stevens writes:-"It is a vigorous grower, and free bearer, and I think will attain great size in more favored parts of the country. My employer has directed me to offer grafts of this variety to the Royal Horticultural Society, if it is considered worth distributing."

This is a very handsome and most excellent pear. Ripe in the end of October, or in ordinary seasons it may probably keep till the middle of November. Few of the new pears can compare with it as regards size, appearance and quality. It partakes more of the nature of the Marie Louise than of the Glout Morceau. We regard it quite an acquisition.

The engraving represents a large, handsome pear in shape, more resembling the Buerre d'Anjou than any other variety we now recollect. It may prove a valuable pear, its origin having been from two varieties, both excellent.

GRAPE CULTURE IN THE FAR WEST.—A correspondent in Kansas writes as follows in regard to grapes and grape information:—"There is no branch of industry that has increased in importance, so far as the mass is concerned, nor is there any branch of Horticulture, Pomology, &c., about which there is such an increasing demand for information, or such

a deep growing interest felt, as that of grape literature in the West, and I should judge it to be the same in the East. Iu fact, we ought to have journals exclusively devoted to that subject. What cares a grape grower about looking over and paying for a mass of matter giving information upon blooded bulls, fast horses and game cocks, all well enough in their place? The intelligence of the age demands such journals; yet it also demands that we have pomological magazines. The grape growers, pomologists (and even farmers) who cultivate grapes, will sustain a journal, or a dozen of them, in the United States. Yours respectfully, A. M. BARNES, Kansas."

Grapes in Ohio.—In absence of cherries and peaches, we of the south shore of Lake Erie, and I may say of the State of Ohio, have had to console ourselves with grapes. It was my intention to have been with you at Rochester, but the getting up of my Grape Show, together with my engagements in laying out of grounds, prevented.

The show of grapes October 1st was even more than usual, both in number of varieties and in quantity, and the show of varieties of wines was more than good. The result of these Shows has been to induce the project of forming a State Grape and Wine Growers' Society, to hold quarterly meetings for discussion and annual Shows. At our late State Pomological Meeting I was deputed to ask all interested in grape-growing in the State to meet at Cleveland, first week in February, to organize the Society, and discuss soils and modes of planting.

In relation to soils, I think there is much yet to be learned. The old adage that to produce good grapes either the soil must be limestone, or very heavy dressings of lime must be applied, will not hold; many of our vineyards around Cleveland being on sand, with not a trace of lime in it, and thus far having had no application of the kind. Our clays, also, within a certain boundary, have but a trace of lime in them, and rest on beds of sandstone shale, yet they produce fine crops of grapes. Will not an annual dressing of gypsum, of say 1½ bushels per acre, furnish all that a crop of grapes require from the soil?

What experience have you had in comparing the quality of Lydia with other white or green grapes? At my Show this past fall, it was tried repeatedly by different persons, in comparison with Anna, Cuyahoga, Rebecca, Maxatawny, and Allen's Hybrid, and universally the verdict was, that the Lydia was much the best grape.

Several parties also tried it with Syrian, White Nice, &c., and gave Lydia preference. Very respectfully, F. R. ELLIOTT, Cleveland, Ohio.

NEW POMOLOGICAL WORK.—The Gardeners' Chronicle mentions the publication of a new pomological work, under the direction of the Society for Regulating and Improving the Varieties of Fruit Trees at Barkoop, De Nederlandsche Boomgard, &c., the first part of which, with Dutch descriptions of the plates, has already been noticed under the title of Le Jardin Frutier Neerlandais, with a French text by Dr. De Gavere, and with a preface by Prof. Karl Koch. work, it is observed in the prospectus, representing faithfully the races of fruits, with all the distinguishing marks with which nature has impressed them, and accompanied by clear and concise diagnosis, seems to be absolutely necessary as a means of clearing up the confusion which exists among The drawings are to be made from nature, by M. S. Berghais, and the plates prepared in chromo-lithography, by M. G. Severevns, of Brussels. The work is to be published in 20 parts, each containing four plates, and descriptions of from 8 to 16 varieties of fruits, and eight parts are promised in one year, the price of each part being 5 francs to subscribers.

This is a very similar work to our Fruits of America, and done in the same style, and price, but at the present rate of exchange, about three times as much,—that is, \$4 per number of four plates; the price of the Fruits of America being only \$1 per number of four plates. Only 80 plates are to be published, and 112 plates have appeared of the Fruits. It will undoubtedly be a valuable aid to European pomologists, though less to our own, as the nomenclature of our Fruits is now well established.

FORCING PLANTS BY SUN HEAT.

BY DR. JAMES WEED, MUSCATINE, IOWA.

If the theory of M. Boussingault is correct, that assimilation in plants only takes place under the action of light, and that in the dark a plant always loses carbon, the conclusion naturally follows that the higher the night temperature the greater the loss plants sustain by elimination, and it is important to inquire if in hotbed forcing there is not, as a general rule, by far too much bottom-heat employed as a common necessity to guard against the liability to extreme changes and cold nights. If so, it would seem wise to provide against these exigencies of cold by mechanical means, rather than by a surplus of heat, which may exert very pernicious influences if not under the complete control and watchfulness of the gardener.

Upon this conjecture we instituted an experiment, last spring, which, though not very striking in its results, served to strengthen our confidence in the practicability of forwarding materially many plants with the employment of but little or no artificial heat.

Shutters of inch boards, twenty feet long, were made entire, the joints not being cemented, as should have been done, and so balanced as to be closed on and opened off of a common hotbed frame with the greatest facility and ease. The frame, placed on the ground surface, was covered with sash, but without any means of artificial heat.

Radishes sown on the 2d of March were up on the 12th, and a few of the plants were killed by frost on the 20th, but those remaining grew well, though very slowly, as the sun shone but very little during their whole growth.

Our record of temperature and clouds commenced on the 8th of March, and that of the temperature inside the frame was discontinued on the 10th of April, as it was mostly open from that period during the day.

TEMPERATURE.

		OUTSIDE			INSIDE.			cronds.				OUTSIDE			INSIDE.			CLOUDS.			
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	3	40	52	43	44	58	60	10	10	10			42			-			10	6	

They were of fine size for the table, and of most excellent quality, the 1st of May—two weeks in advance of those in the open ground. Had the joints been closed with coal tar, and the shutters thatched six or eight inches thick with straw, the result would have been much better—especially if the sky had been ordinarily clear, instead of being almost constantly cloudy.

Tomato and other plants grown in the same frame, though smaller, were, by an intelligent neighboring gardener, pronounced superior to those in an ordinary hothed, as "they would better bear removal to open culture."

For the early production of the radish, lettuce, and aspar agus, this mode of culture is especially adapted, and for for warding plants for removal to open grounds, it commends itself



2. WINE-GLASS METHOD OF TRAINING PEAR TREES.

PEAR TREES ON THE WINE-GLASS PATTERN.

BY CAPT. WM. R. AUSTIN, DORCHESTER, MASS.

HAVING written an article once before upon pruning, &c., (which appeared in your Magazine of November, 1862, Vol. XXVIII, p. 507), and while yourself and others have written so much of late, and so well on the same topic, I had not thought of reverting to the matter again; but at the risk of "running the subject into the ground," I must comply with your request, and say a few words more to accompany the sketch, or drawing, (Fig. 2), you have had prepared from a photograph of one of my pear trees: and let me here repeat what I said when I sent you the photograph, viz., that owing to the impossibility of finding in my grounds a tree sufficiently isolated to give any background, (except of trees). my best specimens could not be made available, and further. that to the high wind blowing at the time, may be attributed the irregularities of the leaders and limbs on the windward. or left side of the tree; but, for the purpose of giving a general idea of the form and style of tree aimed at, this is as well as a more perfect model.

As I have said before, the form I design to give, is that of a modern "wine-glass," or goblet, rounded up in the middle, making a low, stout tree, with open head, in opposition to the close, high pyramid. Before describing the "modus operandi," let me for a moment compare together the two styles. and the great advantages of my pattern over the pyramid, for, unless this point is admitted and made clear, it is hardly worth while wasting time and words as to the manner and The pyramid, as the name implies, is tall and tapering, encouraged by the rank growth of the centre leader to a great height; the whole strength of the tree inclines to the centre and top, while the side-limbs are often weak and drooping to the ground; left to grow, usually, without interference, it forms a close, compact top, filled up with green. sappy wood and spray, excluding the sun and air, holding the wind, and the lower branches standing out in the way, or lying often in the dirt, prevents the possibility of approaching

closely the tree with an ordinary step-ladder to gather the fruit from the top,-the new wood, being shaded, green and sappy, does not harden well and mature, and the whole tree exhausting itself, more or less, in over-growth, does not incline to bear early, and when after long waiting, a few fruits appear, the best specimens are usually at the top, where they are most difficult to get at, and most likely to be blown off: then again, the fruit grown in so much shade, is not as sweet and high colored as that grown upon trees more open, and close pruned, exposed to the sun and light, and with more roots, (in proportion to the top), to give sustenance to the fruit. It must be admitted, I think, that however graceful the pyramid, its form is not adapted to our high winds and open grounds, on quince roots, and probably had its origin in small sheltered gardens in Europe, where many varieties were desired in a small space, and up-and-down room cost nothing.

Now take the "wine-glass pattern," with its low, stocky, open form, the centre leader cut out, all the rest spread, and dividing equally the sap, all equally strong to support the fruit,—the air, light, and sun, freely admitted, (so essential to the perfection of fruit),—the fruit, of course, high colored and sunny, distributed equally all over the lower portions of the tree, which, from its low habit and spreading form, is easily accessible to every part with a common step-ladder, and every pear saved; and the same advantages hold good in pruning and thinning time. Not allowing any superfluous wood to grow, the tree is constantly in shape, its vitality, and tendency, or capacity for early bearing much increased, while the sap, instead of expending itself in wood and overgrowth, is absorbed by the fruit, or forms new fruit spurs and buds, on well ripened wood, for the ensuing year.

Having, as I think, demonstrated that this form of growing pear trees is the best, and proved it, I may be allowed to say, by 20 years of successful practice, I will now, for the benefit of new beginners, go more into details as to the process, first premising, that I confine my remarks entirely to the dwarf, of pear tree on quince roots. These roots, as we all know, are fine and fibrous, do not extend far from the stem, and

resemble some, (when a tree is lifted), a mop spread out; they get their nourishment near the tree, are more tender than the pear root, more inclined to decay in wet ground, lose their life and vitality in soils that bind or pack close, and, being naturally smaller, cannot so well, (and ought not to), support a large top. The pear root, on the contrary, is a more vigorous and voracious feeder, travelling far from the stem seeking moisture and nourishment, the roots much larger, and of course better adapted to sustain and feed a large top. Root pruning may sometimes be admissible on the pear root, to check rampant growth, and coax the tree into bearing, but never, I think, with the quince; we want all the roots we can get, as we see by the numerous trees half reeled over. Neither is it, I think, advisable to shift or replant trees on quince roots; they should be left standing where first planted, (if properly set out, and in a good situation); if in a wet place, or the roots have become root-bound, and lost their life and energy, in such a case, they should be removed to higher ground and looser soil that will not bind. With the pear root, however, it is not unfrequently a benefit to shift and change the tree, and cut off a portion of the stout roots. that smaller and more fibrous ones may start out from the point of severance; while at the same time, a portion of the head should be cut in, to restore the balance, and after the tree has had time to get rooted and established again, (say 2 or 3 years), it may be all the better; but not so with the dwarf, which, as a general rule, suffers by lifting and resetting. That trees, (both on the quince and pear roots), lifted, and reset in a new place, will oftentimes come immediately into bearing, and may even produce a few fine specimens the first year, I know, but the tree is nevertheless a diseased. mutilated subject, and should not be allowed to bear till the roots are healed, new ones growing, and the tree reëstablished again. Having made this long digression, I will now, for the benefit of new beginners, state more in detail my process from the beginning.

I take good thrifty dwarf trees, (not bark-bound and stunted, either imported or native), say two years from the bud, and having prepared the ground by trenching, say two

spades deep, and making the soil light and fine, I set out the young trees in April, in straight rows, 8 feet apart, and the rows, say 12 or 15 feet apart, or, you may set a single row on borders near a walk; the soil all being loose and light, only a small hole need be opened, sufficient to contain easily the roots, (which in the imported tree are usually small, and we rely upon new, fine roots making out from the stem). tree should not be set out like a post, in a small hole, with the ground hard all around it; and here let me say, if your ground has not been trenched, or made mellow by cultivation, the next best thing is to open a very large hole, 4 or even 6 feet in diameter, and return the soil to it broken up and loose, that is, fill up the hole with the same soil, or any other better, especially close round the stem, to encourage voung roots to start out. The trees should be set deep enough to have the juncture where the pear joins the quince 2 inches below the surface, and this will tend to keep out borers, (some recommend deeper planting, to induce a growth of pear root, above the quince roots: this, in my grounds, with trees so near together, I consider a misfortune. If I am going to have pear root, let me know it in the first place, that I may give ample room, and be prepared to wait for a big tree); the trees being set out, and the ground leveled off. I cut off the top, or head it back, cutting out the centre leader, if any, and prepare the tree for a low start when it begins to grow; it is important to mulch the first summer, and apply a top-dressing of good compost manure every fall or winter, to be forked in in the spring when the soil is turned over. Manure should never be put directly among the roots; after the roots are nicely spread out, and covered over with a fine soil, then a layer of manure, of most any kind (compost, stable or barn-yard, preferred), may be put on, and the hole filled up and leveled off even, that the first rains may soak down and carry the juices to the roots. Of course, no weeds or grass must be allowed to grow near the trees, though carrots or vegetables may be cultivated with good effect, to keep the ground mellow, and until the trees become large; the first summer the growth is usually small, but the second spring (a year from planting), they are prepared to start

vigorously, and must now be headed back, or cut in, and the tree formed during this second summer into the way you desire it to go; a certain number of leaders (say 10 or 12), may be allowed to grow, starting the lower ones about 18 inches from the ground, and leaving the stem clean below that,-nothing but these leaders are allowed to grow, taking care to have no particular centre one to enjoy all the sap, but all equally divided; all side-shoots and spray kept off by nipping or cutting off, with very light shears, leaving always 3 or 4 leaves at the base of the twig, for foliage—these leaders, having all the sap, grow fast, and must be topped or cut off when too long, say about 10th of July, or sooner if necessary, to give a check and concentrate the energies of the tree, and stock it up; this may have to be repeated more than once, but if topped too early, the tendency is to throw out more side-shoots and increase your labor, but after about the 10th, or middle of July, the growth becomes sluggish during the hot weather, and if in the fall they start to growing again, the same process must be continued, and thus all the pruning is done during the growing season; this being done each year, the tree is constantly in shape; no saw is ever required to saw off large limbs and waste its energies, and no sap lost in superfluous growth—the wood being exposed to sun and air ripens off well, and predisposes to the production of fruit spurs and buds, and thus early bearing is secured, while the tree has concentrated vitality to support and nourish its fruit. We have heard much said about "pinching," and doubtless if the young shoots can be taken in time, they may be nipped off with the thumb and fore-finger, but I have usually preferred to wait for a greater number to appear before commencing, and then use a very small, light pair of pruning shears that make a drawing stroke, or even scissors are more expeditious than a knife; the work is imperative and urgent from about the middle of May to 10th of July, and many millions of these side-shoots I cut off yearly, enough I presume, to dampen the ardor of any but a full believer and enthusiast, but the tree once into full bearing, the labor is much diminished, and the head properly formed, it is not so hard to keep it so. I have said 10 or 12 leaders;

this of course is not arbitrary, and may be less or more, so long as the principle is maintained, and a low open habit secured: if the tree is near a walk, or you have not room for a round top, you may give a flat form, like a fan-tail, and almost have a trained tree without tieing; in this case a less number of leaders would be needed—in the sketch presented, there are more leaders than my best models have, but which could not be photographed for want of a background. For whatever of success I have had in pear growing, I am indebted entirety to my mode of pruning, and not to "generous culture;" my soil is light and thin, with gravelly. coarse sand for subsoil. I have never manured high, or forced my trees, and after 15 and 20 years' growth they do not average more than 10 to 12 feet in height; every fall, late, after the leaf has dropped and the sap is down, or any pleasant weather in winter or spring, anytime before the sap begins to run, I go over all my trees to adjust and cut back my leaders to within 3 to 6 inches of last year's starting point, and this is all the growth allowed in height, each year, while the main stem and leaders become gradually stouter. As I have said before, there are some varieties (as the Urbaniste, and those making much fine wood), not adapted to this system, while the Duchesse d'Angouleme, Glout Morceau, Beurré Langelier, and many others, cannot be successfully fruited in any other way, (till the tree has great age), though it may flower full each year; so, also. there are some kinds, like the Beurré Diel, Dix, and St. Michael, inclined to crack, that require a closer head, more shade and foliage to protect the fruit from the direct rays of the sun, which hardens the skin, and the first heavy rain, after a drought, is sure to crack the pears, as they cannot expand fast enough, and quite possible they would crack in some soil any way.

I have often been asked how to prune, and what to do with trees which have been left to themselves for 5 or 10 years without a twig cut; this is like calling in the doctor after the disease is seated and cure impossible. If you undertake to cut off and head back such trees, (if vigorous), wherever you cut off, innumerable shoots will put out, filling the whole

top with sprouts, like young suckers, and making a perfect thick hedge—it would be better in such a case of neglected trees, to lift them, and loose some of the roots, or root prune, before attempting to reduce the top, and after all it would only be an abortion; to have a perfect form and all the advantages of the system, the ground work must be laid from the beginning, and continued up with never-ceasing vigilance and industry. "As the twig is bent the tree is inclined."

I cannot close this lengthy article, Mr. Editor, without thanking you for your frequent complimentary allusions to my trees, and for the pains and trouble you have now taken to present a model on the "wine-glass pattern," and hope to be gratified with the further remarks you propose to give on my mode of pruning. I must also, here, express my gratification with the last Report of the late Chairman of our Fruit Committee, ex-president Cabot, wherein he gives me credit as the originator of a new system of pruning, and suggests the propriety of identifying my name with the discovery, by calling it the "Austin method." When veterans in the art. like yourself and Mr. Cabot, and I may add, Col. Wilder, (in his late address before the Pomological convention), and many others, verbally approve and endorse, I may well feel content and assured of my theory, if I had not twenty years of practice to prove it-whatever of merit it has, let your young readers have the benefit. I only trust many of them are members of the Massachusetts Horticultural Society: for to this Society I am mostly indebted for the zeal and enthusiasm that inspired my early beginnings, and if, in return, I have established a new theory of practical value, or contributed my small mite to the general stock of pomological science, I shall not be without my reward.

Pleasant Street, Dorchester, Jan. 1865.

A year since, we applied to Capt. Austin for the privilege of having a photograph taken of one of his beautifully trained pear trees, with a view to place before our readers some idea of the "Austin," or "wine-glass" mode of training, practised by him for twenty years, and which is quite original and distinct from any of the various French styles, combining the

merits of all, and the defects of none. Capt. Austin kindly presented us with several photographs of his specimen trees, but owing, as he states, to the want of some background other than the surrounding trees, and some other causes, the impressions were not so satisfactory as he could have wished. Still, one of them gave a very accurate idea of his system of training, and from that one our drawing was made. Excepting the interference of one or two limbs, owing to the wind, which might have been altered in the copy of the photograph, (but we chose rather to have them remain as the tree was taken), the pattern is a perfect one for all who wish to adopt the wine-glass system of training.

Not thinking that Capt. Austin would find leisure to prepare an article, detailing his mode of practice, we had intended to do this ourselves, but he has so very kindly "began at the beginning" and given the amateur all the details from the first to last, that he has left little or nothing for us to say.

The more we have seen of this mode of pruning, the more we are convinced of its superiority over all other methods, particularly for dwarf trees. It is in fact the real cordon system, now so strongly advocated by Dubreuil, and other learned French practitioners, applied to dwarf trees, the only difference being, that the cordons of Capt. Austin are self-supporting, instead of having the aid of a trellis as in Dubreuil's plan. The advantages of this over pyramidal training is well stated by Capt. Austin himself, and we have only to thank him, as we have no doubt all who appreciate skilful practice will, for his excellent paper. It is certainly a source of high gratification to know that one, whose early life was passed upon the broad ocean, should successfully introduce a new mode of training pear trees, combining all the merits of the most skilful French cultivators who have devoted a life to the subject. It is another instance of the triumph of American art.

The flattering tribute which Capt. Austin pays to the Massachusetts Horticultural Society, is the best evidence among many others of the great influence of this association in the advancement of horticultural science throughout the country.

FLORICULTURAL NOTICES.

NEW FOLIAGED PLANTS .-- Among the plants with remarkable foliage, employed by the Parisian gardeners for decorative purposes, is a new one, called Gandelia Tournefortii, is made use of. It is a great composite of Syria and Asia Minor, with something the aspect of an artichoke, and has been from time to time cultivated in Paris, but lost, as no doubt it has been with ourselves, until reintroduced by M. Balansa in 1855. The plants raised from the seeds then obtained flowered in 1859, after M. Decaisne had had them planted out. The bushy, rigid aspect of the plant, which grows nearly a vard high, together with the form and elegance of its leaves, which are pinnatified and spiny-toothed, the lower ones stalked, the upper, somewhat stem-clasping, give it a very picturesque appearance. Unfortunately it is rare, and can only be multiplied by seeds. It is sufficiently hardy to survive in the climate of Paris, if planted in light, deep soil, not too moist, and protected by a hand-glass, surrounded by straw, or dry leaves, and is therefore what we call halfhardy. The seeds (achenes) of this plant appear to be sometimes substituted for coffee.

NEW WHITE CLEMATIS.—A new and beautiful pure white variety of Clematis lanuginòsa, called candida, has been introduced from France. It belongs to the same open-flowered race, and is admirably fitted to be grown in company with the new deep purple varieties before noticed—C. L. Jackmanii, and violacea—for the sake of the contrast it affords. It is said to be a hybrid, between C. cærulea (patens) and C. lanuginòsa. The plant has somewhat downy leaves, with a slightly undulated edge, and the flowers are pure white, thoroughly expanded, and formed of six sepals, which have a cuspidate point. Judging from the appearance of the blossoms on a young and not very robust plant, the flowers will be of the full size of the ordinary forms of C. lanuginòsa. We learn that another white-flowered hybrid has been received from the same source, under the name of C. lanuginòsa nivea, but the flowers of this we have not seen. The

plant which has furnished materials for this memorandum, was sent by Mr. Bull of Chelsea.

DOUBLE-FLOWERED PELARGONIUMS.—A recent number of the Revue Horticole gives some particulars respecting the production of the new race of Double Pelargoniums, and of the variety called Gloire de Clermont, which has been raised by M. Amblard, a horticulturist of Clermont-Ferrand. contemporary states, that it will take a high place in our gardens, and describes it as bearing flowers as full as a small Ranunculus, and as having been produced from seeds gathered from a semi-double variety, of doubtful merit. It appears that seven plants were raised from the seeds of this semidouble plant. Some of them produced, instead of petals, little tufts of green leaves, or sepals, compact and imbricated, forming a globular bud, which scarcely opened; others, yielded flowers with a little red at the tips of the petals; a sixth, had flowers of a lively color, but they did not open; while the seventh bore magnificent flowers, full, well expanded, and bright in color. The constancy of these features has been proved, for the variety has been propagated, and more than a score of plants of the projeny has yielded these flowers. Lecocq, the director of the Botanic Garden at Clermont, who describes this very remarkable Pelargonium, observes, that upon the plant then before him, was an umbel of 14 fine flowers, which, if the foliage was not seen, might be mistaken for those of Lychnis chalcedonica. The variety is said to be of vigorous growth, and to have large, undulating, green leaves, without any sign of a colored zone, although, by a slip of the pen, the new variety is classed amongst the zonal Pelargon-The flower-stalk is stiff, and bears from 10 to 15 flowers, so arranged as to form a bouquet. The buds are globular; the petals, upwards of 40 in number, are disposed like those of a double Ranunculus, and are oval in form, rounded at the top, and of a lively vermilion, with a white eye; the stamens are completely wanting; and the pistil is represented by a small green tubercle. It appears that M. Amblard, not being specially occupied in the culture of this class of plants, is desirous of parting with the stock.

YUCCA TRECULIANA.—A recent number of L'Horticulture Français, figures and describes Yucca Treculiana, which appears to be Yucca canaliculata, published in 1860, in the Botanical Magazine, (see our vol. xxvII, p. 84), by Sir Wm. Hooker, having the same rigid, channeled leaves, widened above the base, and asperous beneath, the same compact inflorescence, the same sub-cunnated, cream colored flowers, and the same kind of stamens, but like a figure 7. Saunders, by whom the Y. canaliculata was flowered, had, moreover, it would appear, obtained a young plant of the same species from Paris, though the history of his flowering plant is somewhat uncertain. We gather from M. Herincg's account, that this is the largest of all the arborescent Yuccas. The French figure was made from a plant which had flowered in the collection of M. Alphonse Lavallee, at Segrez, and which was upwards of 7 feet in height, before the flower-stem appeared, and furnished with leaves almost from the base. The leaves were narrowed above their point of attachment, then much widened, and terminating in a stiff, horny point, the under surface being rough, like a rasp, and the edges cartilaginous purple, and finely denticulated. Owing to the stem being cankered, the inflorescence was dwarfed, but it was dense, and ovoid-oblong, with the creamy flowers in the axils of the reddish-tinted bracts larger than the flowerstalks. This Yucca was introduced from Mexico, in 1849, to the garden of M. Louis Noisette of Nantes, who found it among some imported orchids. The original plant was acquired by M. Lavallee in 1859, and was the finest example known in Europe, but has perished since flowering. satisfactory to learn, from the experience of the French cultivators, that this fine species is hardy. At Nantes, in M. Noisette's garden, it grew in the open air, and perfectly endured the winters which occur in that part of France. Segrez, where it was at first protected by a case, it has been planted for two years in the open ground, sheltered only by a slight straw roofing, and has not shown any trace of injury from frost. We believe the same plant is cultivated in this country under the name of Yucca cornata, and concava.

This information, upon this grand class of plants, we gather from the Gardeners' Chronicle.

800. ROSE. GOLDEN YELLOW. Garden Hybrid.
Illustration Horticole, 1984, pl. 407.

A new Tea Rose, remarkable for the unusual amplitude of its flowers, which are of a beautiful golden yellow with innumerable petals, generally revolute, and possessing the rich aroma which belong to the roses of this charming group. It is a seedling of M. Ozer, of Caen. It is remarkably vigorous, having an ample and lustrous foliage, with but few spines, which are of a bright red. Possessing so many excellent qualities it is destined to become one of the most popular of the Yellow Tea Roses. (Ill. Hort., Aug.)

801. URCEOLINA PENDULA *Hub*. DROOPING URCEOLINA. (Amaryllidaceæ.) Peru.

A greenhouse bulb; with yellow flowers; appearing in spring; a native of Peru; increased by offsets; grown in light rich loam. Bot. Mag., 1884, pl. 5464.

A new and very beautiful Amarylliaceous plant, with a stem a foot or more high; crowned with an umbel of eight or more pendent, yellow, urceolate flowers, with projecting stamens. It came from the woods in the Andes, and was received by Messrs. Veitch, with whom it flowered last season. It is a very fine addition to this showy class of plants. (Bot. Mag., Sept.)

802. MACLEANIA PULCHRA Hook. SHOWY MACLEANIA. (Vaccineaceæ.) New Grenada.

A greenhouse plant; growing 1 foot high; with scarlet flowers; appearing in spring; increased by outlings; grown in hight peaty soil. Bot. Mag., 1864, pl. 5485.

This is one of the showy vacciniaceous plants, presenting a somewhat straggling or pendent growth, with oblong leaves, and clusters of scarlet, tubular flowers, which are pendent, and appear in aggregated clusters at the axils of the leaves. It grows freely, and forms a very showy and beautiful plant. (Bot. Mag., Sept.)

Sorticultural Operations

FOR FEBRUARY.

PRUIT DEPARTMENT.

The month of January has been cool, and for the most part, cloudy, rainy, and snowy, with no extremes of cold, and few, if any, warm, pleasant days; throughout, rather unfavorable for early forcing of all kinds. The ground, however, is in fine order, without frost, and now protected with a thin, but good covering of snow.

Grape Vines, in the earliest houses, will now be in a forward state, and the berries will soon begin to color. Use much caution now in watering, especially in long-continued cold, cloudy weather, should such continue. Give air liberally in all good weather, and give an additional covering to the border. Stop laterals as they continue to grow. Vines in the greenhouse will soon begin to break, and some attention should be given that they are made to break evenly; if the tendency is to the leading buds, bend the top downwards, and keep it there, by suspending a small stone by a string, which will cause the lower eyes to swell, and the upper end can be tied up gradually as the shoots appear. Syringe often in good weather, and maintain a moderate, but not high temperature, say, 50° to 55° at night, until the middle of the month, when it may be increased a few degrees.

PEACH, AND OTHER FRUIT TREES in pots, may be brought into the greenhouse, or grapery, to furnish a succession of fruit.

ORCHARD-HOUSES should have attention, open the sashes in warm, sunny weather; and shut up if severe cold sets in.

STRAWBERRIES, intended for forcing, should be brought into the house, and placed on a warm shelf, near the glass. Water very sparingly till they begin to grow.

CUCUMBERS, for early forcing, now growing in small pots, should be put out into well prepared hotbeds, or set out in the house, where there is a bottom heat of 80° to 85°. In the latter case, train to a trellis, near the glass.

Scions of fruit trees may be cut the latter part of the month.

PLOWER DEPARTMENT.

As the season advances, the labor of the industrious gardener increases, and in this month and the next, the greater portion of the season's work is to be commenced, and prosecuted with vigor. Propagation of all kinds is one of the principal things, before the warm weather advances, and the out-door labor begins. A stock of all the bedding plants, as well as next winter's stock, should be provided for at once.

CAMELLIAS will soon begin to grow; as this takes place, begin to water more abundantly, and syringe more freely; but if the plants are kept cool, this may be omitted till next month. Young plants may be re-potted, and, if time, even the older ones. Now is a good time to head in straggling plants, and get a young, free, and bushy growth.

AZALRAS, coming into bloom, should have a good place, and be more

freely watered and syringed, discontinuing the latter after the flowers begin to open. Plants wanted for flowering in May, should be removed to a cool house, or even a light, cool cellar, from whence they may be taken back in April. Re-pot young stock intended for specimens.

Pelargoniums now require much attention, as too much water and too much heat will cause a rank growth that will injure their blooming well; keep rather dry, and very cool, so as to cause a continued, but stocky growth. Tie out the branches of specimen plants, and give each one abundant room; turn the plants round once a week. Young plants should now be re-potted, and have the same general treatment as old plants.

CINEBARIAS AND CALCEOLARIAS should be shifted into their blooming pots. Keep near the glass as possible, and water carefully; fumigate often, for the green fly.

GLOXINIAS AND ACHIMENES, already started, should be encouraged in their growth. Put in a fresh stock for a successional bloom.

JAPAN LILIES may be placed in their blooming pots, if not already done.

FUCHSIAS, intended for large specimens, for autumn bloom, should be encouraged by a shift into larger pots; young stock should be potted off.

Caladiums, already started, may be shifted soon into larger pots; fresh stock may be now started, if not already done.

MONTHLY CARNATIONS will now be in full flower; if cramped for room, shift into larger pots; put in cuttings now for next year's stock.

SEEDS, of various kinds, may now be planted; prepare shallow pans, and sow Mignonette, Stocks, Zinnia, Pansies, Phlox Drummondii, Cobsea scandens, Maurandya, &c.

CUTTINGS of all kinds of bedding plants should now be put in, particularly Geraniums, Verbenas, Petunias, Salvias, Lantanas, &c.

CYCLAMENS should have a place on a cool shelf, near the glass, and be rather more freely, watered.

AMARYLLISES should now be set up on a warm shelf, and have slight waterings till the new growth appears.

BEGONIAS should be shaken out of the old soil, and divided and re-potted, using a light, turfy, sandy soil.

FERNS may now be shaken out of the old soil, and re-potted.

GLADIOLUS, for very early blooming, may be potted, and started into growth.

HEATHS AND EPACRIS may now be propagated from cuttings.

VEGETABLE DEPARTMENT.

This is the month to prepare for bringing forward all early vegetables. Proceed at once to prepare manure for a hotbed, throwing it into a conical heap, and turning it over once or twice till the rank steam is exhausted, when it may be made into a good solid bed, 3 feet high. Place on the frame, and cover with soil, and after the heat has subsided, prepare for planting. Cover the manure with three or four inches of light soil, and in this, sow in drills, lettuce, radishes, cauliflowers, tomatoes, &c. Sow cucumbers in pots; give air in due season, and by the last of the month, such as require it, may be removed to new beds, previously made ready.

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THE

MAGAZINE OF HORTICULTURE.

THE PROGRESS OF HORTICULTURE.

THE Thirtieth Year of our labors in the cause of Horticultural science has passed away, and though we have briefly reviewed the results of this long period, it remains for us to notice quite as briefly the accumulated facts and information of the year, regarding everything connected with the favorite pursuits to which our pages are devoted.

To witness the exhibitions of our Horticultural and Agricultural Societies, with their immense gatherings of cultivators and their products; and to look abroad over the northern section of our country, teeming with luxuriant crops, and busy with every industrial art, it is difficult to believe that a terrible war is devastating any portion of the land, or that mighty battles are almost weekly waged against a rebellious foe. The realization is not felt, away from the scene of action; and with the energy of our people, called forth in this great trial of our nation, we calmly and quietly pursue our avocations, knowing that upon its agricultural and commercial prosperity, rests its principal basis, and the means to prosecute, under the blessings of Providence, the conflict to a final and successful issue.

With this prosperity,—whether it be permanent, or to be sooner or later reversed, and the greater development of the wonderful resources of our country, agricultural, manufacturing, and mineral, rendering us yearly more independent of foreign aid,—wealth has been distributed, and the means acquired for building houses and embellishing them, and planting trees and their cultivation, and the neighborhood of our large cities as well as remote towns have felt the influences of this prosperity. Horticulture has, consequently, re-

ceived greater attention, and become a more attractive and interesting study, drawing within its circle great numbers who have heretofore thought it worthy of little consideration.

We append our summary of the character of the season:—
January was a rather mild and open month. It commenced with a high wind, almost amounting to a gale, with the thermometer at 4° on the 2d, and on the 5th there was a cold snow storm of about 2 inches. The 7th the temperature fell to zero; the cold continued until the 13th, when it began to moderate, and the 15th some more snow fell; it was then milder, with a warm rain on the 19th. The remainder of the month was mild, with but little snow.

February was commenced remarkably mild; usually our coldest weather occurs from the 1st to the 20th; the first week was mostly cloudy, with some rain and snow. The 10th it was cool again; but it soon moderated, with another light snow and some rain, on the 16th. A fresh and high wind then cooled the temperature, and the morning of the 18th was the coldest of the year, with the thermometer at 5° below zero. A light rain succeeded on the 22d, and the last week was mild and pleasant.

Winter seemed about gone, and March opened with a temperature of 80°, which continued with but slight variation the whole month; indeed it is rare that so few changes take place during this month. For twenty-four days out of thirty-one, the temperature did not vary but a few degrees, 28° being the lowest, and 40° the highest; and on fourteen days the thermometer was just 32° at sunrise; the other seven days were cooler, but the lowest was 13°, at sunrise. It was mostly fair or fine throughout the month.

April commenced with an easterly rain storm; after which it was cool and frosty, scarcely warmer than March, until the 21st. The 10th and 11th were snowy and rainy, and on the 12th we had four inches of snow. The 21st the temperature was 40°, and the 24th, at 60°, the first spring-like day. The remainder of the month was cloudy, rainy and cool.

May opened more genial, with light rains and warm showers, and on the 9th the temperature was 82°, when vegetation began to start, and on the 9th peaches were in bloom. It was then cloudy and cool, with frequent showers up to the 17th, when it became warm again, with a thundershower on the 21st; this was succeeded by a week of cooler weather, and the last two days were quite warm, with the temperature at 92°.

The month of June was cool again, with showers up to the 15th, the highest temperature being 85°, and down as low as 40° on the 11th. On the 15th the mercury stood at 92°, and continued warm, with the exception of one day, to the close of the month. The 24th it was 92°, and the 25th 100°. Not any rain, or even a light shower fell after the 12th, and the drought, though not yet generally severe, greatly injured the strawberry crop.

The first day of July was cloudy with indications of rain, but except a very light shower on the 2d, none fell. The 6th the temperature was 92° again, and very dry; the week succeeding was warm. On the 11th, a light shower refreshed the surface of the ground, but passed off and set in warm again, with the temperature from 80° to 90° up to the 25th. On this day there was a genial rain, the first that had fallen for nearly six weeks. The closing week was fine and very warm.

With August refreshing rains were expected, but the month continued very dry and hot, with the temperature at 100° again, the second time it has reached this high altitude. On the 3d it was quite cool, and an easterly storm cooled and refreshed the dry and parching earth. The 5th it was warm again, and it continued very warm without rain up to the 17th. The thermometer ranging from 86° to 96°. It was then showery and cooler, but set in warm again, without rain to the end of the month.

After more than two months of drought, the change came: September was cooler with a very fine rain on the 5th, and the temperature ranging from 45° to 75°, with showers and some rain up to the 14th. A warm week succeeded, and the month closed rather cool, with light rains and showers. On the 25th a high wind did considerable damage to fruit trees.

October commenced with a cool easterly storm, succeeded by a week of warmer weather than the average. It was then cool, and on the 10th the temperature fell to 28°, with a sharp white frost; up to the 17th it was cool, showery or rainy, with one or two light frosts, and then warm again. It was then warmer, with some cool mornings, accompanied with frost.

The month of November continued cool, with heavy frosts on the 1st, 2d and 3d. It was then cool and stormy for a day or two, and warmer up to the 11th. These rainy days were succeeded by a light snow on the 15th, with the temperature at 23°, and a heavy frost on the 17th, with the mercury at 18°. The remainder of the month was variable, cloudy, fine and warm.

December opened unusually fine and warm, with light rains during the first week; but on the 8th the wind set in fresh from the north, and the temperature fell to 15°. The 10th it began to snow, continuing during the day, and 5 to 6 inches fell. The 12th it was colder, and the 13th the temperature was just zero. Up to the time we write it has been cool and wintery, 3 or 4 inches of snow now covering the ground.

Compared with other years it will be seen that the winter of 1863—4 was milder than the average, with but one day when the temperature fell below zero; there were no extremes of either heat or cold, the highest temperature being only 45°, and this only one day. The uniformity of the winter has rarely been equalled, the temperature varying but little from 32°, for weeks together, yet we believe the average cold was low; but it is this uniformity which is favorable to trees of all kinds, the extremes being the severer test; but few inches of snow fell during the winter, yet, in consequence of the evenness of temperature, a light snow covered the ground for more than two months, protecting the earth, and the roots of trees and plants. A comparison of the year with previous years, as regards fruit, would be interesting, but this we must leave to another time.

The characteristics of the year may be summed up as a mild winter, a wet and cool spring, a dry and hot summer, and a cool, cloudy autumn, almost the reverse of 1863. Crops have generally been fair, though not over-abundant. The

pear crop was about up to the average, larger than last year; the apple crop, in New England, small. Peaches, where there are healthy trees, bore abundantly. Grapes were never better, or more abundant; in fact, the year has been unusually favorable; no mildew, and not the least frost up to the period of ripening of almost every grape, even the Isabella. Strawberries would have been remarkably good; the vines wintered well, and showed well, but the drought cut the crop down nearly or quite one-half. Other summer fruits were plentiful. After the hot and dry summer, which has thoroughly ripened the somewhat short and stocky growth of fruit trees, there is every appearance—provided the present weather does no injury—that the coming year will more nearly approach to the abundant year of 1862, than either that of 1863, or the season just closed.

HORTICULTURE.

We should be thought by some remiss of our duty if we did not allude to,—as the most prominent feature of the year, the deep interest manifested in grape culture throughout the whole extent of our country. It has been increasing, but the extraordinary year, and the large crops have greatly augmented the desire to plant, until it has become almost a mania. This deep interest in grape growing has not been simply because we have new and superior varieties, but because there has been more information diffused upon every branch of fruit culture, and the mass of the people have ascertained that they can have all these luxuries, with a little care and attention. The vineyard culture of the grape is destined to be a very great interest, and is one of the developments of our industry. With high duties, and excessive rates of exchange, the importation of foreign wines must be exceedingly small, and to supply the demand why should not our varied and fine climate supply even all that is wanted? Why then should not grape culture attract universal attention? We must admit, notwithstanding the assertions of some, that we cannot make a really valuable wine, that it has been too long neglected, and that there are some localities, if all will not do it, that must enable us to make a wine good enough for all.

We have labored, and shall continue to labor, in the accomplishment of this great and important object. Our present volume will make the grape a speciality, and, we trust, without damaging our interests, to do for this fruit what we have already done for the pear.

Strawberry culture has received a new impetus, from the introduction of new varieties, said to possess remarkable merits: these great expectations are somewhat in advance of any decisive information, but many of our cultivators are so credulous that they eagerly purchase every new sort, with a glowing description, expecting to find it to surpass all others: old kinds are consequently neglected, and then the pampered new ones are contrasted with the former, to show their superiority; give the old sorts the same care and the decision would be reversed. We certainly believe in progress, and think there might be more valuable varieties produced than we now possess; but the standard is high, and the probabilities small, yet when the excellence of any new kind is fully proved, we would make every effort to disseminate such acquisitions. The Agriculturist is now the prominent berry, and if equal to its reputed merit, will be a very valuable variety. It certainly is a very vigorous plant, and we hope will fulfil the expectations of cultivators. Whether it is pistillate or staminate is not certainly known. Mr. Carpenter of New York informs us that it is staminate, but some writer, who has forced it in the greenhouse, states that he could not obtain any fruit; but upon examination with a magnifying-glass, he detected minute, undeveloped stamens. From this we doubt not it is pistillate. Hovey's Seedling has "minute, undeveloped stamens," if examined with a magnifying-glass, or even the naked eye. No cultivator ever saw the Triomphe de Gand, but what it exhibited prominent stamens, even if it did not set its fruit freely, which we do not know that it ever failed to do; certainly not with us.

Among foreign strawberries, many of which have been recently introduced, no variety has come up to La Constante, either for size, beauty, quality, or productiveness. Every year adds to the high reputation it has already obtained as one of the finest of all strawberries. Bijou, Lucas, and some

others of De Jonghe's seedlings, are said to be very fine, but we have not fruited them. Of American sorts. Russell's Prolific has attracted considerable attention from the glowing descriptions of its immense berries; but as one cultivator has said of La Constante, that it "went up like a rocket and came down like a stick:" we think the illustration very original and happy, but unfortunately applied to the wrong variety: had it been Russell's, the sagacity of the writer would have been shown. With us the Russell was large, and produced well, but the berries were soft, dark, and rather dingy in color, and but slightly less acid than the Wilson. Lenning's White has proved a very excellent strawberry, new in color. a good grower, fair size, an abundant bearer, and rich in quality. Bartlett proves to be our old and well-known Boston Pine; it is pleasant to see such high praise accorded to an old sort, under a new name. After what we have said in our previous volumes, it is unnecessary for us to refer to the various modes of culture, as there is nothing new to detail.

Orchard-houses are gradually becoming indispensable adjuncts to every complete garden, especially where the peach is considered a desirable fruit; for under this treatment it can always be had in abundance, and in perfection. Success has everywhere attended the efforts of those who have taken hold of the subject in earnest. The plum and the cherry, now difficult to raise, from the depredations of the birds and insects, may also be easily grown, and excellent crops obtained. Of other fruits, beyond the interest which a full collection always affords, the results are less important; still a fine stock of handsomely shaped trees, in full fruit, whether peaches, plums, cherries, pears or apples, will always be a source of the highest gratification. Believing this, we have from time to time given all the information on this interesting subject.

Pear cultivation has continued to be a subject of great interest, and attention has again been directed to the production of seedlings, of which some varieties of promise have been brought to notice; a few of these we have figured and described in our last volume, and others will be noticed in the course of the year. The Edmonds, which was brought

to the notice of pomologists, by Mr. Barry, in 1863, has again fruited, and has proved quite equal to its high reputation. As we shall notice the report of the last session of the American Pomological Society, as soon as published, we defer any general remarks, in relation to the newer pears, until that time. The crop of the year has been fair, and the quality excellent. We have been pleased to learn that our notice of "One Hundred Fine Pears" has given very general satisfaction, and afforded much valuable information to amateurs. We are inclined to believe that the information obtained by longer experience will induce cultivators to change their opinions in regard to the best six, or twelve varieties, and that the place of some must be filled by others which have maintained their superiority.

FLORICULTURE.

Prominent among the flowers of the year must be named the gladiolus, the pronunciation of which name has been a source of much discussion. A reference to our index of plants, in any volume, will show what the true accentuation is, viz.: Glad-ì-olus; yet so general has become the custom of calling it Gladi-ò-lus, that we fear it will be difficult to alter it; "a rose by any other name will smell as sweet," and whether Glad-ì-olus or Gladi-ò-lus, the flowers will lose none of their beauty. No better evidence can be afforded of the capability of our cultivators to render us almost independent of all foreign productions, than this flower; for in the short space of four years, we have surpassed all that has been done for this flower in Europe. Seedlings have been raised, which far excelled any of the newest French or English seedlings, and thousands upon thousands have been produced. same zeal bestowed upon the rose, the prony, the pelargonium, or any other flower, would undoubtedly give similar results; why not make the trial? The two former are hardy, and can be grown by everybody; the latter, and all tender flowers, would need the aid of the greenhouse. Will not our enthusiastic cultivators set to work in earnest?

Japan appears to be, par excellence, the "flowery-land," though the name is applied to the Celestial Empire. But the

researches of Von Siebold, Fortune, Veitch, and Hogg, have given us novelties, which the most extravagant fancies of the most enthusiastic plant-lover did not dream. Dr. Hall, to whom we are all so deeply indebted for his disinterested labors in making our country participants with that of Great Britain in the acquisition of the great golden lily, and other choice things, has given us, personally, such glowing descriptions of what he saw, that we are almost afraid to report them, for fear we should be pronounced another Munchausen; only think of a Wistaria with clusters of flowers 3 feet long! have endeavored to prevail on Dr. Hall to give our readers some notice of what he saw, and he has partly promised to do Recently, we had the pleasure of looking over several of Mr. T. Hogg's acquisitions, which were sent to his brother in New York, and among which were some rare plants; now that importation is almost or quite prohibited, by the rates of exchange, and duties, &c., it will be cheering to know that we can obtain the same plants which Messrs. Fortune and Veitch introduced to Europe, without the expense and danger of importation.

The culture of the rose is yearly becoming more extensive, and this most beautiful of flowers is attracting the attention it truly deserves. Many reasons have combined to cause its neglect; one of the most common, being the use of budded plants. They are yearly produced and sold, and in the place of the magnificent varieties, introduced with glowing descriptions, there is nothing but a single blossom, which, on close examination, proves to have come from the stock, either a Manetti or Briar. We do not mean by this to wholly deny the value of budded roses, which in the hands of intelligent and skilful cultivators may serve a good purpose, but under the treatment of the mass of cultivators the stock kills out the scion, and the result is as we have stated. many,-at least two-thirds of the Hybrid Perpetuals,-are weak growers, and half-tender, and liable to be killed off by our severe winters, resulting in disappointment, and leading to the ignoring of the whole tribe. Yet there are some as vigorous and hardy as the commonest hardy rose, and which bloom freely and abundantly all the autumn; when these are

selected, they will not fail to give entire satisfaction to any rose amateur. Our advice is:—avoid budded roses; leave their selection to a respectable dealer; manure highly; prune hard, and no fear need be apprehended of the result.

The importation of new plants, or new and choice varieties of popular flowers, has been exceedingly limited, and our collections have been but slightly augmented from this source. A few of the cheaper plants, such as verbenas, chrysanthemums, &c., have been added; but of really new plants, the acquisitions have been few. Our Floricultural Notices have revealed the many riches in store, when our commercial relations are restored to their former basis, or something near it; till then, our amateurs must be content with what they possess, with limited exceptions, and then only at extravagant prices. A reference to our last volume will show what has been the progress of floriculture abroad.

ARBORICULTURE.

If the utilitarian views of our cultivators has led them of late years to plant fruit, rather than ornamental trees, we can only indulge the hope that, successful in their efforts, they have not wholly forgotten the ornamental. We think we can discern a more appreciating taste for beautiful trees and shrubs, and landscape effect, generally. These are the natural accompaniments of wealth, and the more prosperous condition of our country, the erection of suburban villas and country houses, has awakened a better taste for rural art.

We have already alluded to the liberality of Mr. Hunnewell, in enabling the Massachusetts Horticultural Society to move in the important work of arousing our planters to the necessity of a better display of taste, in the ornamentation of their grounds. We have no doubt Mr. Hunnewell's aid has come just at the right time, and that the Society will take such measures as will accomplish the views of the donor. Already has the example of Mr. Hunnewell, in his own grounds, been of especial service in two ways, viz., in showing how much can be done by some preconceived plan of operations, and what trees may be depended upon to give additional variety, and picturesque effect. The latter is a

slow and somewhat expensive work; for time is required to test the real hardiness of a tree, and new kinds are costly, and require care in the task of acclimating them. But much has been done, and planters are deeply indebted to such gentlemen, for their disinterested efforts in the right direction. Japan trees are now the interesting objects, and while some have already proved entirely hardy, it is hoped many others will be added to the list. One of these beautiful acquisitions is the Double Deutzia, (D. crenata fl. pl.) sufficient in itself to repay the introduction of a dozen less hardy plants. The hardy species and varieties of pines, spiræas, junipers, &c., are now numerous enough to break up that monotony which has so long existed, from the exclusive use of half a dozen kinds.

And lastly we come to the rhododendron and azalea, now, after more than twenty years of repeated notice, just beginning to be truly appreciated. Henceforth they will become the prominent objects in every beautiful plantation, whether of limited or greater extent. The American grounds, so denominated in England, where these shrubs have so long held universal sway, are to be no less an important feature of our own plantations, where there is space for their introduction. Here, revelling in their appropriate place, the rhododendron, azalea, kalmia, magnolia, ledum, andromeda, and other similar and equally elegant shrubs, will form a peculiar source of interest and beauty.

HORTICULTURAL LITERATURE.

The best evidence of an appreciative interest in horticulture, is the increase of publications devoted to the dissemination of information upon the art of cultivation. These have been more numerous than usual. Mr. Fuller's Grape Culturist has come just at the right time, and fills a place left vacant; it is a most valuable addition to our stock of information on grape growing. The Orchard-House, a republication of Mr. Brehaut's treatise, which appeared in a previous volume, has been published, with a supplement by the editor supplying information valuable to cultivators, omitted by Mr. Brehaut. Two works, not strictly horticultural,

but yet admirable aids to the dissemination of valuable information upon rural art, have appeared; they are "Ten Acres Enough," and "How to get a Farm." We can commend them to the attention of all. A new edition of Burr's Vegetables of America is in preparation, but it is not yet quite ready. The magazines devoted to horticulture have continued to maintain their usual excellence, and the Horticulturist, now under the editorial supervision of Messrs. Woodward, is about to appear with increased attractions.

CONFUSION IN THE NURSERY.

BY D. W. LOTHROP, WEST MEDFORD.

WHEN an amateur plants a garden, and shows that interest in his trees which he must to make them a pleasure of peculiar charm, his disappointment is intense if he finds a large portion of them prove false to their labels. These trees he has watched from year to year, by sunlight and perhaps by moonlight; he has dug around them, and endeavored to make their bed soft and comfortable; has tried to make them grow regular by proper training and direction, as he would his children; has gazed with great delight upon their early vigorous shoots, and has particularly sought out their first appearance of fruit buds. But perhaps his Duchesse proves a Vicar, his Sheldon a Jargonelle, his Superfin a Napoleon, and his d'Anjou something of unknown worthlessness. Not so bad as they might be, some may say. No; sometimes something better than was ordered is got; but even with the few exceptions, it does not much mitigate the vexation. It amounts to about this-instead of having a choice selection of pears, or other fruits, he has only an ordinary mixture. He now begins to cut away and insert grafts of his choice. And here, unless he is very cautious in procuring his scions, he will be again brought to grief.

This evil may be unavoidable to an extent; but if we would seek a reform in the nursery, we must complain of its delinquencies. Honest men will be more careful; rogues

less daring. The poet Butler wrote the following well-known couplet:—

"Doubtless the pleasure is as great
Of being cheated as to cheat."

But this is more appliable to legerdemain than to labelling Mistakes or frauds in the nursery are so common fruit trees. that the victims may smile even at a simple allusion to them: and I fear myself I shall not be able to write a serious article? "Why," says one, "you must expect one third of your trees false. Nurserymen have no means of telling one variety from another, except in rare cases, by leaf or peculiar growth; and even then it's nothing but reasonable conjecture. They are as frequently deceived as any one, and innocently propagate the deception." Perhaps this is generally true; new varieties particularly are subject to mistakes, as they are not readily recognized. But then if occasionally a man should get into the business whose ethics in trade are not "first rate," or are falling into decay-degenerating, as we say of some old fruits-and who thinks that rapid and handsome-growing trees, even of very poor sorts, are more readily brought into the market and sell better than those of a contrary character (some of our best varieties growing slowly). he might have the weakness to vield to the temptation, and furnish such trees for all varieties ordered? To the honor of nurserymen, however, I must say that I have never encountered but one in my limited dealings with them, who arrested such suspicion. With him I now think it was a fault rather than a misfortune. His establishment was within thirty miles of Boston, and as he has passed hence, to avoid offence, I will give him the posthumous synonym of "Crisp," should I again have occasion to allude to him. Pardon the retaliation.

About twelve years ago, having some pear stocks to work, I went into a neighbor's ground—who had lately set some choice pear trees from a popular nurseryman—and finding a tree marked "Seckel," I took a scion therefrom, and also one from a tree labeled "Glout Morceau." The stock into which I inserted the Seckel soon commenced to grow rapidly, and continued most of the season to do so, surpassing everything else. It was very stocky and bushy. I began to suspect

it was not the Seckel, and from a few specimens which it bore three years ago, I judged it might be the Buffum—not being acquainted with the habit of that tree. In 1863 it again bore a few small fruit, which plainly showed that it was neither Seckel nor Buffum, but a little pear so shocking and bitter as to nauseate one. How came it in the nursery? After waiting, however, ten years for disappointment, I felt partly recompensed by the splendid stock it gave me; being six inches through at the butt. It has anew a vigorous head of Swan's Orange, from scions which I knew grew on a Swan's Orange tree. The bitter specimens alluded to above I showed to the gentleman from whose nursery my neighbor's trees were purchased, and he quietly observed that it was some poor sort which had "crept in." In a year or two I can laugh with him about it.

The scions marked Glout Morceau also grew rapidly, and threw up very long shoots. They had the ash-colored wood of that variety. Getting a few specimens, I inquired of the same gentleman what it was, and he said it was the Glout Morceau. It certainly looked like it then. The following year it ripened up yellow in early autumn, with a fine blush, cracked and rotted badly on the tree. I then showed another specimen (a greenish one) to the gentleman, when he pronounced it the Catillac. Whatever it was it grew like a rocket. The stock is now doing good service.

Meeting Crisp one spring in Boston, about ten years ago, I bought of him some scions of the Duchesse d'Orleans—a variety which stood high in my mind—and they were inserted in a vigorous stock. They grew into a beautifully-shaped tree, and presented a clean, thick, very glossy, dark-green leaf like the Camellia. I imagined I recognized the leaf in Hovey's Fruits of America, where it is described. Whenever I saw the fruit or heard it praised, I exultingly exclaimed to myself, "Well, I've got that!" I watched it with interest, and in time it bore one fruit, which looked rather hard, dark and irony all summer; and when frost came it was placed in the cellar, where it remained till February. At this time it had changed its color (I had changed color about it before) seeming to be about ripe, and on being tasted proved rather

sweet, but coarse and ugly. The Winter Nelis soon took the place of such an "Orleans."

At the same time I bought of Crisp some grafts of the famous Beurre d'Anjou. Inserting one in a good stock, it grew about five feet the first season, and was an inch in diameter at its base! The next year it threw out graceful and vigorous laterals, and from season to season continued to grow very rapidly, forming one of the most beautiful pyramids I have ever seen, without a touch of the knife. The shoots were a dark brown and the leaves dark green; but as I did not then know that the color of the wood of the d'Anjou was much lighter and ashy in general appearance, the error was not detected. But alas, a few years brought a cluster of small, worthless, dark-brown pears, which suddenly rotted on the tree, and showed conclusively that a tree is known by its fruit, not by its label. Could so handsome and rapid a grower as this have been retained in the nursery for the mere purpose of raising splendid trees?

Wishing to procure some buds of the Beurre Clairgeau, which stood at the top of the list of European pears, I called on a respectable nurseryman and found him in his nursery. I told him my errand, when he proceeded to a certain tree in a nursery row which he said had borne a little, and clipped me a twig. The same afternoon they were inserted in the branches of a vigorous Jargonelle, in hopes of sooner seeing the fruit. The next spring they started well, and I felt as if I had grown several inches myself, as I now had the "crack" pear! I used no other buds that day, nor in fact during the In a few years several pears appeared. solace. But about midsummer I fancied the fruit was rather too round for the Clairgeau, and knew it a month after—as they began to turn yellow! Still they were hard, and were suffered to remain a little longer, till they assumed a blush, but were soon found all rotten at the core, with a rather firm shell. I showed one to the author of the buds at the Horticultural Rooms, and asked him to give its name. He said he did not know it, neither did he grow it! But, said I, you gave me the scions for the Clairgeau. He was astonished. Finally, he thought he might have it at a given place in his

garden. A singular confession this, which compelled me to re-work two good stocks that now delight in the Bosc. Job had his trials, no doubt; but stocking a garden with choice fruit trees was not one of them!

Falling in with Crisp every spring for the first few years of my gardening experience, I bought a couple of dwarf pear trees for special locations—one the Beurre Diel, the other the Flemish Beauty. In about five years the latter bore; but the fruit, though small, was brown and had some resemblance to that variety. I was deceived for a year or two, but it grew better, when I ascertained it to be the Henry IV., a very excellent pear. The Diel grew very rapidly, even under disadvantages; and after about eight years bore one small button pear, succeeded by another the following year! As I inserted in its stock the d'Anjou, I could not help thinking that Crisp was not much unlike the pear described in the last paragraph.

This gentleman also gave me some scions of the Fulton, which proved to be the Lawrence; and some Lawrence which proved to be the Belle Lucrative. Also some of the Golden Beurre, which grew rapidly, but turned out a large worthless fruit, like the one noticed as the Glout Morceau above.

Wishing to grow the famous Tompkins County King apple, the ubiquitous Crisp was ready, and said I might have some cuttings from some young trees then on their way from New York State. When they arrived I paid him for them, and worked them on two vigorous stocks. In a few years one of them bore a few specimens. They were handsome and smooth, but seemed in August to be rather light-colored for the King and a little too flat. A month more confirmed my suspicions, and still another told plainly that they were the Salmon Sweet! For this mishap I reserve half of my indignation, as one of the trees I shall let grow—in memory of the transaction and the man.

It must not be inferred that I was equally unfortunate in all my trees, or with most other nurserymen; for in several instances all, or nearly all, were true to label—even bundles of trees from Western New York, bought at auction, have proved so. But in regard to Crisp, truth compels me to say, that I do not recollect of ever having a tree or a scion from

him that proved to be the variety for which it was purchased! Were he now among us, how much soever of the agreeable he might exhibit, I am impressed—in remembrance of the record he has left in my behalf—that I could not reciprocate it.

I did not intend to write anything like a sermon, but if, from the facts presented, a moral can be drawn, it will be gratifying. The reputation of nurserymen should be made known, whether good or bad; and purchasers of trees should be careful to whom they give orders, and in procuring scions endeavor to know from what trees they were taken. A great deal of delay and vexation may thus be avoided.

THE COLORS OF PEARS.

BY J. S. HOUGHTON, PHILADELPHIA.

It is an interesting question, how far the colors of pears may be influenced by climate, soil, special manuring, mulching or other treatment. It is quite certain that some cultivators produce fruit much more delicate in complexion, and more highly colored than others. The Duchesse d'Angouleme, which is generally of a pale green, changing to a dull yellow, is frequently seen with a bright glossy skin and a brilliant scarlet blush on one side, adding much to its beauty. The red color on the Louise Bonne de Jersey is frequently very intense, while other specimens are of a dull brown. Dr. Boynton, of Syracuse, New York, once exhibited some pears at a meeting of the National Pomological Society, covered with a skin like glass, and tinted with the most brilliant hues, crimson, scarlet, and gold. We have never seen any fruit since, equal in finish and color to those specimens. Dr. Boynton attempted to explain the cause of this perfection and color, by some geological theory and special manuring; but either pomologists could not understand him, or he did not understand himself; nothing ever came of it.

How far is it possible to discover and control the causes of color? Many cultivators of fruit have no doubt observed that

sickly trees, or those in a stunted and unhealthy condition, will generally produce fruit more highly colored than healthy and thrifty trees. The fruit will probably be smaller than on more vigorous trees, but will take on a much richer color. This may perhaps be attributed to the fact, that growing slowly, the juice of the fruit and the fabric of the skin may be more perfectly elaborated early in the season, and hence may be more thoroughly acted upon by the rays of the sun. has been remarked by Prof. Balfour, a distinguished English botanist, that "the colors of flowers appear to depend upon the oxidation of their juices." The colors produced on the leaves of trees, in autumn, we are constantly told by vegetable physiologists, is due to the action of oxygen upon the juices and the texture of the foliage. We are also told, by the same authorities, that the sap of trees carries up with it common air, carbonic acid and oxygen, as gases, in addition to the mineral elements which may be in solution in that fluid.

Now from these facts it would appear that a stunted or checked growth, and free oxidation of the juice of the fruit would tend to increase the brilliancy of the color.

But to obtain a good ambrotype, you must have a plate properly prepared for the action of the sun's rays; and to get highly colored fruit you must undoubtedly have a texture of skin fitted to take on the desired tints. What shall be the constituents of this skin? and how shall these constituents be collected and organized?

The first evident constituent or element of a proper skin is a somewhat dense fibre; next, a certain amount of silica, as in the cornstalk and bamboo; then perhaps, (for all this is something like guess work) some iron and other minerals, in free supply; after these, what acids? or what phosphates? Who can tell?

One of the substances employed in manure, which has been supposed to have a great influence on the colors of *flowers*, is *charcoal*. Whether there are any facts in existence to show what the effect of charcoal is upon fruit, in respect to color, we do not know. We have used many hundred cords of fine charcoal, about fruit trees, as a top-dressing, and as a mulching agent, without discovering that it produced any effect on

the color of the fruit. That charcoal attracts oxygen with considerable avidity, and yields carbonic acid gas pretty freely, we presume there is little doubt. Further experiments in its use, in respect to its effect on color, are to be desired.

Of the mineral substances which enter into the composition of manure, the alkalies, oxide of iron, and sulphate of iron, have been supposed by some writers to have an influence upon the color of fruit.

We must confess that although we have tried some experiments with a view to produce color in pears, by special treatment, we have not yet arrived at any thing like certainty in this respect. But we are still experimenting, with the hope of greater success.

Of one thing we feel convinced, and that is, that the art of manipulating the soil and managing the trees, (special manuring and training) is still in its infancy, and much improvement may yet be made in these departments of gardening. We should be gratified to see this subject further discussed by the Editor of this Magazine, and other pomologists who have succeeded in growing highly colored pears. Has any body ever so looked into "the womb of time," as to discover the process by which their most beautiful pets were produced?

SPECIMEN OF IONAISM.

BY D.

I send you the following bagatelle, as a complimentary review of one of those modest little emanations from the delectable island of Iona—one of those "refreshing indications," and oft-appearing "landmarks," which are so helpful to benighted inquirers after the true way, and the true things!

On the first page we have the following morceau: "Allen's Hybrid has all of the excellence of the famous Golden Chasselas," and more too, for it is "more spirited." Now this is all very good, as it stands. But note how skilfully the fact is clinched by the remark immediately following. "It is with-

out any of the offensiveness that has detracted so largely from our natives, as represented by the Isabella and Catawba, or, by the still lower and more objectionable Concord and Hartford Prolific." (!)

"The Iona, (page 2), is in perfection three weeks before the Catawba and Isabella, and two weeks earlier than the Concord." "Its time of ripening is very early, and about the same as that of the Delaware, beginning to be good to eat, (p. 4), before the Concord had colored in the slightest degree." News!—so far at least as the Delaware is concerned,—and good news too, isn't it? And true; for (p. 4), "the Delaware is not behind the earliest in ripening, among hardy vines," and (p. 11), "is in marketable condition as early as the Hartford Prolific." (!) Ergo, the Iona ripens with the Hartford Prolific.

The following has a "refreshing flavor," (p. 7): "If it had not been for the most sedulous and untiring efforts at the Iona establishment," "this country would have been still slumbering over the Isabella and Catawba, for Concord and Hartford Prolific have not in themselves enough of goodness to sustain life." Good joke, that! How pitiable is the condition of those "who (p. 4), have only had their perceptions of the flavor and refreshing enjoyment which the vine can furnish, sparingly exercised upon the fruit of the very imperfect Israellas, or of the more gross and foxy Concord, and Hartford Prolific." Bad, indeed!

The Israella (p. 2), is "intensely black and fully ripe for market, August twentieth, and it exceeds the Iona in earliness of ripening, by more than one week." Now, if the Delaware is "not behind the earliest in ripening," and the time of ripening of the Iona is "about the same as that of the Delaware," and the Israella is ripe "more than one week" before the Iona, it must follow that the Israella is "beginning to be good to eat" about the time that the Concord is going out of blossom! Quite early and desirable, isn't it? And then it is so "intensely black," (p. 2), and "the color is a dark purple," (p. 13). You see there is no mistaking the color, and that is quite an item in identifying the fruit!

One important fact must not be overlooked, particularly with regard to the Israella, and that is, that it is "not offered to the public for trial," but only after "extensive trial." Has it not always "shown the same uniform results in other hands," in Boston; in fact, all over Massachusetts, and Maine, and Connecticut? "Answer me that." And has it not "passed through a long and severe trial," (p. 5), and have not its merits been "confirmed by the uniform voice of the vast number of good judges who have critically examined it from year to year?

The impartial author of the tract before us very prudently makes no positive promise as to the quantity of wine and raisins which his two new pets will supply to "this country," but the quality is more than hinted at when he says, (p. 1): "The Delaware, as a wine grape, has no superior in any country, and no equal in this." "Iona (p. 5), is probably equal to Delaware in value for wine." "The Israella may be expected to make a rich wine, very distinct, &c." What "delightful refreshment" in prospect for us all!

And those raisins: "The Iona dries readily to the best and most spirited of raisins." "It is scarcely inferior to the best of Malagns, for making the best of raisins." "Possessing with the Muscat of Alexandria, this quality, upon which the production of the best raisins depends." Good! No "keg raisins" there!

Now let us all join with the disinterested author in "the manifestation of the *proper* feeling toward those "ignorant and interested" individuals who have "zealously advocated" "the Concord, and other inferior kinds," and strive earnestly for the power to appreciate that "goodness of quality" in grapes, wines, and raisins," "which will constantly increase in importance, as perceptive ability becomes more cultivated, which it is destined to be with greatly accelerated rapidity."!!

HOOIBRENK'S MODE OF TRAINING THE GRAPE.

A year ago, a notice appeared in the English gardening journals, of some remarkable results obtained by a new mode of training the vine, practised by M. Daniel Hooibrenk, upon M. Jacquesson's estate at Epernay. These results were so decided as to attract the attention of the Emperor of the French, who made an unexpected visit to see the experiments of M. Hooibrenk. But beyond some general remarks, in regard to the training of all trees and vines at an angle of 12° below the horizontal, and its results upon their productive qualities, no information was given.

We have, however, in a recent number of the Gardeners' Chronicle, obtained a tolerably full account of M. Hooibrenk's system, and though like all new modes of culture it has its advocates and depreciators, yet, it seems to us, to be founded on sound principles, and entitled to a full and thorough trial; and though, as it will be seen, the experiments were made under glass, (in a grapery or cold-house), it appears to us that the system has few advantages over the ordinary modes of practice in that position. It is more especially adapted to our hardy grapes in the open air, being neither the short system as advocated by some, nor the long system as advocated by others, but a medium between the two, and particularly valuable on account of the ease with which the vines may be laid down and protected in winter.

We have but little space at this time for extended remarks. The account, with the engraving, explains itself. We ought to say, however, that we have omitted an engraving, showing the bilateral system,—that is, a vine with branches extending each way from the main stem, as first practised by M. Hooibrenk, because he has abandoned it himself, and because it is this in the main, which gives it so great a claim to the attention of American grape growers. By the unilateral system, the shoots can be all laid down in one direction, while with the other or old plan, it would be difficult to bend the branches in an opposite direction to their growth, without endangering their being broken.

The simplicity and neatness of M. Hooibrenk's mode are apparent; but he attributes his great success to the inclination of the branches below the horizontal line, (10° or 12°). There can be no doubt that it is favorable to a complete development of the buds, from all our knowledge of the vine, and the tendency of the sap towards the terminal shoots; thus, while in the breaking of the buds the inclination assists in their stronger development, so later in the season, when the new shoots have made their growth, judicious stopping will still guard against an undue supply of sap towards these shoots, and direct it towards the growth of the fruit. We commend M. Hooibrenk's system to our amateurs and intelligent grape growers:—

The system of vine culture propounded by M. D. Hooibrenk, of Heitzing, near Vienna, has attracted so much attention and discussion on the Continent, and is still regarded there with so much interest by those holding favorable or unfavorable views respecting it, that some further explanatory particulars will no doubt be acceptable to many of our readers.

We commence with a remarkable report which has been presented to the Société Centrale et Impériale d'Horticulture de Paris by a commission charged to examine this method of cultivating the vine, as practised in the garden of Madame Furtado, at Rocquencourt, and in that of Gen. Jacqueminot, at Meudon. The following is a résumé of the more important passages of this report:—

At Rocquencourt M. Fournier first conducted the Commission towards a pit or glass-case (bâche) which had been set up against a wall 8 feet high, and of considerable length; and explained that the results obtained proceeded from old vines, which had not yielded any produce for several years, as much by reason of age, as by the evil influence of masses of shrubs growing in front of them. These shrubs had been removed, and large trenches opened at the foot of the wall, the trenches being filled with good soil and manure, and the old vine stems laid down therein, the terminal branches being either fixed against the wall, or trained as espaliers. The

vines throughout the whole extent of the wall had become furnished with vigorous shoots, rising vertically to various heights, and then turned off to one side and lowered a little below the horizontal line, in order to form long fruit-branches. The inclination of the fruit-branches was from 12° to 15°. All these long inclined branches had the most of their buds developed, almost all of the buds bearing one or oftener two moderately fine bunches, not, however, attaining the condition of perfection. In all those cases where the stem had only one long branch, the first eye had produced a shoot, which being trained vertically and not stopped, became fit to replace the fruit-branch in the following year. But wherever on the same stem there were two, three, or four fruitbranches, only one or two of them yielded shoots fit for the replacement. The inclination of 12° to 15° below the horizontal line being regarded as a distinctive and essential character of the Hooibrenk method, the equal bursting and fertility of all the buds of the fruit-branch, whatever might be its length, being attributed to it, the Commission was induced to examine closely all the eyes along the whole length of the fruit-branches, and though here and there the equality was nearly realized, yet, in many cases it was not manifested, either in the breaking or vigor of the buds, or in the number and quality of the bunches. The greatest vigor showed itself at the extremities, while the centre was generally inferior, and sometimes altogether naked.

The inclination of the fruit-branch, indicated by M. Hooibrenk, was held by M. Guyot to be no new thing, since it had been practised from time immemorial in France, as at Jurançon, at Madiran, and in other places. M. Guyot maintained that the depression of the branches was neither necessary nor advantageous, and that the horizontal line was better adapted than any other to secure the equal development of buds, and of the fruit crop. This equality, so well obtained in the French vineyards, would disappear, he argued, if the cordons, instead of being horizontal, were inclined downwards. M. Forest expressed the opinion, shared by MM. Malot and Guyot, that equal growth and fructification throughout the length of a fruit-branch depended much more

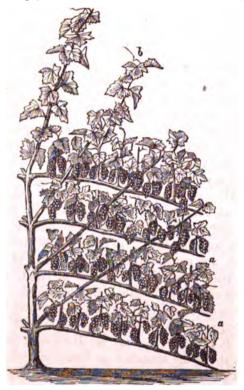
upon the pinching or stopping being done at an opportune time, than upon the mere inclination of the branch some few inches more or less below the horizontal line.

These having been examined and discussed, M. Fournier conducted the Commission to another pit or glass-case (bâche) containing some old vines in horizontal cordons, furnished with their grapes, and other vines laid down distant from the wall, bearing one, two, three, or sometimes four long branches, the greater part inclined downwards, but some horizontal. All these long branches were furnished with grapes. The stems, which had three or four long branches, produced only one or two shoots for replacement, so that the same mode of pruning could not be repeated the next year. These vines bore abundantly, but the grapes were of third or fourth-rate quality, and inferior in flavor to the fruit of vines trained in horizontal cordons, which latter, moreover, were found to yield with perfect uniformity both shoots and fructification, each branch bearing as many clusters as shoots.

It was therefore concluded that the abundance of fruit and the vigorous growth observed were the natural consequence of successfully laying down (recouchée) the stems of the old vines; and that the appearance, consistency, and flavor of the fruit were the result of a temporary fertility induced by the superabundant vigor thus thrown into the plants, and not durable qualities as in the case of the cordon and courson vines. It was also found that when the vines had but one long fruit-branch, they produced at the angle a bud of sufficient strength to yield a shoot for replacement; but that when they were furnished with two, three, or four such branches, they did not produce the new shoots necessary in the following year. While therefore acknowledging the ability and practical success with which M. Fournier had established and conducted his experiments, the Commission found in their results nothing to constitute a new invention or a new system.

Count Lelieur, in his *Pomone française* (1842), remarks that in certain countries they leave on one of the short branches (coursons), one shoot without pruning it. This shoot is called pique, ployon, or marcotte, according as it is

kept strait, or bent, or is thrust into the ground to make it take root. The vine yields sometimes as much on this alone, as on all the rest of the short branches; but it is necessary in order to load a vine with these long branches that it should be vigorous, planted in good soil, and of at least four years growth. The vine-dressers of the environs of Paris multiply them too much, thus exhausting the plant



1. HOOIBRENE'S MODE OF TRAINING THE GRAPE.

and lowering the quality of the produce. The fruit of the short branches always ripens before that of the long ones; there is also a marked difference in the latter between the ripening of the clusters at the top and those at the base of the branch. The celebrated French pomologist therefore only accords exceptional praise to this mode of pruning. But even from this point of view, the system may

deserve to be known, although with us as a general rule it can only be applied to vines cultivated under glass.

M. Hooibrenk's description of his system was translated from the German and published by M. Ladrey in La Bourgogne for March 15, 1860, and is there accompanied by figures.

Subsequently M. Guyot stated in the Journal d'Agriculture pratique (April 5) that the system of M. Hooibrenk was only a plagairism of the French system of vine culture, of which a summary with engravings had been published in 1857 in the same journal. M. Hooibrenk, it is said, has since abandoned the curvature of the branch above the old stem. as well as the bilateral system, in order to employ the unilateral system, and the simple lowering of the fruit branch. however still proposes, as in (FIG. 1,) some dispositions which are held to be impracticable. The fruit-branches (a) are from 5 to 6 feet in length; from the base of each of these is to be trained a young shoot (b) of from 7 to 10 feet long for All experience in tree culture establishes the axioms that an abundance of fruit prevents the production of wood, and reciprocally that a superabundance of wood is opposed to a large production of fruit. It is therefore argued that if there are eight, six, or four branches of 7 feet long laden with fruit, this will not permit of eight, six, or four young shoots of similar length being produced on the same stock at the same time—an opinion corroborated by the vines seen at Rocquencourt, where they bore several of the long It is observed that M. Hooibrenk in his figures everywhere shows the branches as being opposite instead of alternate, a circumstance likely to embarrass those who allow themselves to be guided by his figures.

M. Pynaert, to whose account we are indebted for the foregoing extracts, suggests that the system might perhaps be applied to vines treated as espaliers, particularly under glass, with good results. In forcing, especially where it is sometimes necessary to allow the trees to rest for a season, he thinks one might, by the aid of these long branches, load the vines at pleasure.

On the same subject M. Rivière has recently stated at one of the meetings of the Société Impériale d'Horticulture, that Philippar, in his course of culture, published in 1840, gives precise indications as to the inclination of the cordons of vines and branches of fruit trees. One of the plates of this work represents the trees with bent branches, after the method practised by Cadet, of Vaux, and others in which they have the inclination recommended by M. Hooibrenk. He also finds in the translation, published in 1763 by Dupuy d'Emportes, of the Vegetable Staticks of Hales, a figure representing vines, with branches inclined according to the same system.

The method of M. Hooibrenk has thus, it will be seen, both its advocates and its depreciators. No doubt the present season will produce further evidence of its results in France and Germany. In the meantime our own cultivators may do well to take notice of it, as some modification of it may after all be found useful if we should ever come to grow grapes on the orchard-house plan.

General Aotices.

CHINESE YAM.—In the year 1862 my plantation of yams consisted of two rows, about 3 feet apart, occupying a space of 42 feet in length by nearly 6 feet in breadth. The ground had been trenched to a depth of about 2 feet 6 inches, and manured as for a crop of potatoes. Soon after the middle of March the sets were planted 12 inches apart, and about 3 inches below the surface of the ground, on the top of ridges 1 foot high. When the plants began to grow they were roughly staked with ends of oak branches, that could not have been used for staking peas. The crop was taken up about the end of November, and after having been kept in a dry place till the beginning of January, it was well cleaned, and its weight ascertained to be 70 lbs, and a fraction, English weight. I calculate the produce to have been at the rate of 1 lb. for every 34 square feet of ground. This year (1863.) I planted three rows in a space exactly 48 feet long by 8 wide. The culture was the same as last year, and the crop, well dried and cleaned, weighed about 113 lbs. This gives a weight of 1 lb. to 3.4 square feet-a result very similar to that of the preceding year. We, in our household, value the Chinese Yam so highly for the table, where it is

especially useful at the season when the best keeping potatoes begin to deteriorate in quality, that I intend to extend my culture of it considerably. If I have not done so more rapidly in the course of the last two years it was because, instead of subdividing my sets, so as to increase their numbers, I have generally planted them of full length, (from 9 to 12 inches long—longer perhaps than is necessary,) with a view to obtain tubers of a good size, and well suited for the table.—(Gard. Chron.)

HOLLTHOCKS.—At the last meeting of the Royal Horticultural Society, Mr. Tillery, of Welbeck, invited attention to a property in the Hollyhock which if known to the initiated, does not appear to be commonly known or practised among cultivators generally. It is, that seedlings may be had to bloom satisfactorily the same year in which they are sown. Mr. Tillery's communication was accompanied by some remarkably fine grown flowers, admirable subjects for garden decoration, in illustration of the treatment which he recommends to those who have not conveniences for wintering a supply of plants. These flowers were in fact sent to show that the seeds of Holyhocks sown in February will yield vigorous flowering plants the following September,-a great desideratum in filling up shrubbery with masses of these gorgeous autumnal flowers, for which purpose of course seedlings of a good strain, as the florists say, are exceedingly well adapted. It was explained that in the case in question, the seeds were sown in a peach-house in the beginning of February. The seedlings were planted singly in small pots and kept growing in heat till the beginning of April, when they were planted out, some in well prepared garden soil, others in masses in the shrubberies. All have flowered or are coming into flower. It is well known, Mr. Tillery observes, that severe or wet winters cause the Holyhocks to rot, when not protected by frames, but by raising them from seeds every year, a supply can be kept up with little trouble. It is also well known that certain kinds of Holyhocks may be reproduced almost true to color and properties when raised from seeds, and such are of course very desirable parents to adopt when this method of treatment is carried out.- (Gard. Chron.)

Massachusetts Forticultural Society.

SATURDAY, Nov. 5, 1864. An adjourned meeting of the Society was held to-day—the President in the chair.

Capt. Austin announced that he had received the sum of \$100 from Wm. Thomas, Esq., as a donation to the Society. The thanks were voted for Mr. Thomas's liberal gift.

The thanks of the Society were voted to Wm. T. Andrews, Esq., for the offer of Andrews Hall for the opening exhibition in May last.

The following members were elected at the last meeting in October, and

the present: P. A. Ames, Boston; F. J. Lake, Grantville; Samuel Atherton, Dorchester; G. W. Holmes, Boston; Henry N. Gardner, R. M. Cushing, J. G. Cushing, Belmont; Francis Skinner, Boston; S. N. Gaut, John Sowle, Somerville; Joseph H. Bell, Malden; George Dorr, Dorchester; Reuben W. Reed, Oliver M. Winship, Lexington; Edward Spaulding, Jamaica Plain; George Lincoln, Jr., Hingham; Jonathan Preston, Boston; William E. Bright, Waltham; Wm. Everett, Roxbury; Peter C. Brooks, Boston. Adjourned one month to Dec. 3.

DEC. 3.—An adjourned meeting of the Society was held to-day—the President in the chair.

A letter was received from C. J. Sprague, Esq., accompanied with an herbarium collected by the late Dennis Murray, stating that Mr. Murray's daughters wished the Society to accept of the same.

The thanks of the Society were voted to the Misses Murray for their acceptable present, and F. Parkman, J. C. Hovey and Dr. Wight appointed a committee to make such disposition of the herbarium as they deemed expedient.

The President appointed the Treasurer, Jos. Stickney, and C. O. Whitmore a Committee to settle with Mount Auburn Cemetery.

The President, from the Executive Committee, reported the following appropriation for premiums for the ensuing year:—

Garden Committee,			•	300 00 .
Flower Committee,				1200 00
Fruit Committee,			•	1100 00
Vegetable Committee	е.			400 00
	-,			

Josiah Stickney announced to the Society that Dr. W. J. Walker had presented the Society with 97 shares of the Connecticut and Passumpsic Rivers Railroad. The thanks of the Society were unanimously voted to Dr. Walker for his liberal donation, and the President was authorized to acknowledge the same.

The following members were elected:—William Adams, Winchester; Charles Stearns, Brookline; George Russell. M. D., Boston; J. W. Hubbard, Boston; Edward Lawrence, Charlestown; G. B. Loring, Salem; Horatio N. Glover, Dorchester; Abraham Jackson, Boston; Gardner Prouty, Littleton; William Thomas, Boston; B. P. Cheney, Boston; John S. Farlow, Newton; William Parsons, Boston; Charles Barnard, 2d, West Newton; George Springall, Malden; Charles Scott, Boston; J. B. Fenno, Boston; Henry Nichols, South Boston; Henry M. Wellington, West Roxbury. Adjourned two weeks to Dec. 17.

DEC. 17.—An adjourned meeting of the Society was held to-day—the President in the chair.

On motion of C. O. Whitmore, it was voted to make such alterations in the front façade of the new Hall as would conform to the revised plan of the architect, provided the cost did not exceed \$2500.

Adjourned two weeks to Dec. 31.

DEC. 31.—An adjourned meeting of the Society was held to-day—the President in the chair.

J. F. C. Hyde, from the Fruit Committee, made their annual report, which was accepted.

Capt. W. R. Austin, from the Garden Committee, made their report, which was accepted.

E. A. Storey presented the report of the Flower Committee, which was accepted.

A. Pierce presented the report of the Vegetable Committee, which was accepted.

Further time was given to prepare the report of the Library Committee. The meeting then dissolved.

Forticultural Operations

FOR JANUARY.

FRUIT DEPARTMENT.

The month of December has been cold, cloudy, and stormy, with an unusual quantity of snow, and one or two severe cold days, the temperature falling to 5° below zero. Such weather has been trying to early forced houses, and has required much care and labor to maintain an even temperature. With the present month the days will be getting longer, and the sun higher, and though the weather may be colder, the increased sunlight will more than make up for the severity of frost.

GRAPE VINES, in the early houses, will now be swelling their fruit, and as the season advances will grow rapidly, and by the last of the month the berries will require thinning. If the laterals grow rapidly, keep them topped in to one or two eyes beyond the fruit. In warm, sunny days keep the house well damped, but in cloudy weather be cautious of too much moisture. Renew the covering on the border, if the heat is exhausted. If the vines in the grapery or greenhouse have not been pruned, attend to them immediately, and clean and wash the vines at once.

PEACH TREES, FIG TREES, AND GRAPE VINES, in pots, may be brought into the grapery or greenhouse, and started into growth.

ORCHARD-HOUSES should have attention; ventilate freely in warm, sunny weather, but close up on the occurrence of severe frost.

STRAWBERRIES intended for forcing, and kept in frames, may now be brought into the house, and placed on a warm shelf, near the glass.

CUCUMBERS, for early forcing, may now be planted in pots, in a hot-bed, or in the house, where there is a bottom heat of 85° or 90°.

PLOWER DEPARTMENT.

The last month has been unfavorable to the growth of plants on account of the cloudy and stormy weather, and as soon as the weather is fine again, the opportunity should be taken to air abundantly, that the plants may acquire more vigor and strength. With the new year the duties of the

gardener increase, and the coming month will be a busy one, where many bedding plants are wanted for garden decoration. Clean and rearrange all the plants in the houses. Wash the pots, top-dress where needed, and preserve a neat and gay appearance. Prepare for potting the various plants which require to be started next month.

AZALRAS will now be coming into bloom, unless the plants have been kept in a very cool house. Water more abundantly as the flowers expand. Plants intended for blooming in May, should now be tied into shape, and kept in the coolest part of the house, and rather dry, though they should not suffer for water. Young stock, intended for good specimens another year, may be removed to a warm house and started into growth at once.

PELARGONIUMS will now require the most attention; specimens should be shifted into the blooming pots this month, and young plants re-potted. Keep rather dry for a few days, and water sparingly for a week or two; give an abundance of air at all times, that the growth may be short and stocky; pinch off any strong shoots, and thin out small and weak ones; tie out and regulate the plants so as to form beautiful specimens.

CAMELLIAS will now be in full bloom, and should be carefully watered; syringe occasionally in pleasant weather.

CINERARIAS, potted early, will now be coming into flower; those intended for late blooming, should now have a shift into the flowering pots. Calceolarias require the same treatment. Keep on a cool shelf, near the glass.

GLOXINIAS AND ACHIMENES may be re-potted, and placed in the warmest part of the house, where they will soon begin to grow.

JAPAN LILIES well advanced, may have a shift into larger pots; remove to a cool shelf in a light place.

SEEDS of various kinds may be planted this month, viz., Stocks, Pansies, Double Zinnia, Mignonette, &c., &c. Sow in pans or boxes, and keep on a shelf near the glass.

FUCHIAS. Old plants should be pruned into good shape, re-potted, and started into growth; cuttings may also be put in for a new stock.

CUTTINGS of all kinds of bedding plants may be put in as soon as they can be obtained.

RHODODENDRON AND AZALEA seeds may now be planted.

CALADIUMS should be shaken out of the old soil, re-potted, and placed in the warmest part of the house, where the temperature is not less than 65°. Water very sparingly until the young growth makes its appearance.

NEAPOLITAN VIOLETS in frames, should be well aired in all fine weather, guarding against frost by covering with mats and shutters.

CANNAS, intended for large showy specimens, in the open ground in summer, may now be started by dividing and potting the roots.

ERYTHRINAS may be re-potted, and started into growth for early blooming.

MARANTAS, of various kinds, may now be divided and potted, keeping them warm, and rather dry, till they begin to grow.

HEATHS should be kept as cool as possible, without frost.

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FOR 1865.

A MONTHILY JOURNAIL

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> No. CCCLXIII. MARCH, 1865.

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AUTHOR OF THE FRUITS OF AMERICA.

HONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFORD, WORCESTER, ROCHESTER, BUPFALO, CLEVELAND, WILMINGTON, ETC. ETC.

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[Extract from "Moore's Bural New Yorker," of July 16, 1864, Mr. Bragdon having previously visited my grounds in Buffalo.]

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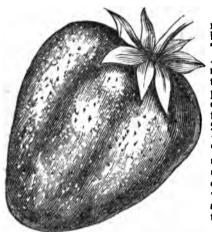
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GRAPE CULTURE IN MASSACHUSETTS.

GRAPE culture is everywhere attracting much attention. What was at one period confined mostly to the Middle and Western States,—from the unsuitableness of our climate to the varieties then cultivated,—has now become a wide-spread interest throughout the whole of New England, and our own State in particular. With the introduction of new sorts adapted to our locality, ripening without any difficulty in all ordinary seasons, the grape has become one of our most important fruits, and appears destined to rank next to the pear, if not next to the apple, among the most profitable products of the garden and the orchard.

Formerly the grape was a pet thing, planted in warm, cozy corners, and trained up the sunny side of the house, against some out-building, or upon a high fence or screen, to coax it into maturity and render it a palatable fruit. Few had the favorite spots to plant them, and fewer still the time to train them up and lay them down, and often lose a whole crop by mildew or rot. Hence, their cultivation was limited, their quality indifferent (in our climate), and the foreign grape extensively grown in cold houses to supply the place which our native vines ought to fill. This, after a time, awakened the energies of our industrious cultivators, and they sought to remedy this great need,—the solving of which was easy enough, viz., new varieties adapted to our climate. faith in the belief that the Creator had not planted the vine by every hedge-row and road-side throughout New England,wreathing every tree within its reach with its leafy branches and purple or rosy berries for no other purpose than to ripen and drop its fruit,—the attempt was made to tame its wildness. and bring out from its hard, pulpy and austere juice the luscious qualities of the foreign grape. Scarcely a dozen years have passed away, and if this has not been realized in the Adirondac, Allen's Hybrid, Iona, and other sorts, another equal period of equal success will most assuredly bring about that millenium of the grape grower.

For thirty years we have counselled our cultivators to this result. One of the first articles in our first volume gave an account of a new seedling grape. Dr. Camak, of Georgia, a year or two later, advised the production of seedlings, and our subsequent volumes were the first to record and describe some of our now prominent varieties. Year by year we have chronicled all that has been accomplished, and though made familiar with this annual progress, the present condition of grape culture is astonishing when compared with the past.

This brings us to a summary of the progress of grape culture in Massachusetts the past year, which we find in the annual report for 1864, of the Committee on Fruits, of the Massachusetts Horticultural Society, made by their excellent Chairman, Mr. J. F. C. Hyde. As it comes from one who has had a good opportunity to examine various specimens, the information will be all the more acceptable, and it will convey the combined views of gentlemen who are fully capable of forming a reliable opinion on what has come before them.

"We now come to a subject which is of great interest to the public, that of Grapes. No fruit is attracting more attention than this, at the present time, throughout the country. New varieties are being introduced every year, as the result of the great efforts that are being made to improve this fruit. The past season has been a favorable one for grapes, except in very dry soils. Little or no mildew was seen. The season was long, so that even the Isabella and other late varieties ripened off finely. If we could be sure of one season in three equal to the past, grapes would be a profitable crop. It is true the fruit was not so large as in some seasons, but it all ripened. The show at the Annual Exhibition was especially fine in this department. W. C. Strong presented many varieties, twenty-five or more, making a very interesting and instructive exhibition. Prominent among these was the Allen's Hybrid, to which he has paid great attention; also, Delaware, Concord, and others. The several numbers of Roger's Hybrids in his collection were not generally ripe at this time. E. A. Brackett showed some very fine specimens of the Crev-

elling, Iona, Delaware, and others. The first named was the finest we have seen, and seems to justify all that has been said of it. J. W. Bailey sent some specimens of the new grape Adirondac, which were fully ripe, and seemed to have been so for some days; thus showing that they ripened this year by the middle of September. This new grape is one of decidedly high flavor, of fine appearance, being black, and of good size, both in berry and bunch. If it shall prove to be, as it is claimed, as early or earlier than the Hartford Prolific, -the earliest grape of respectable character that we now have, - with its superior quality, it will take a high place in the vineyards of those who grow grapes for market, as well as for home use. In wood and foliage it very closely resembles The Iona, shown by Mr. Brackett, is one of Dr. the Isabella. Grant's new seedlings, and has been in the market but one or It is the color of the Delaware, oval shape, slightly mottled and striped, rather loose bunch, berries medium size, excellent quality, superior to the Catawba. Though its color may not be in its favor, yet there can be no doubt of its being a valuable grape for a portion of the country, if not for Massachusetts. It has been raised in perfection by Mr. Brackett, at Winchester, for the two past years. Those who like a good grape will at least try this new candidate for public favor. Dr. Grant, by his agent, also exhibited the Iona and the Israella. The latter was a black grape, of medium size, both in berry and bunch, but as the specimens were removed contrary to the rules, before the close of the Exhibition, your Committee had no opportunity to test them.

Of Allen's Hybrid we can speak more confidently than we have been able to heretofore. It ripened fully in open situations, and was sweet and good. This variety is a great favorite with those who have tested it, especially with those who admire a very sweet grape. It is of the best quality, high flavored, and scarcely second to any grown in-doors or out. If there is any question concerning this grape that remains unsolved, it is its hardiness, or ability to endure the winters unprotected. We propose to leave a vine fully exposed this winter for the purpose of testing it in this respect.

Several of Rogers's Hybrids have been seen on our tables. such as Nos. 1, 4, 15, 19, 43, and others, but your Committee do not feel disposed to give a decided opinion on the merits of any of these. It has already been said, that some of these varieties did not ripen early enough to be valuable; and it may be added, that as tested by us, they were found to have a hard pulp, and to be of inferior quality, except No. 4, a black grape, of fair quality, which ripened well: but as the specimens we have tried have been mostly produced on young vines, it is unfair to fully decide upon their merits. be strange indeed, if, among so many, there were not some good ones. We would, however, advise the public to plant rather sparingly of all the numbers until they have been more fully proved. We regret that they should have been launched on the market with numbers instead of names, which will have the effect to produce great confusion in regard to them. The Framingham was on exhibition, but your Committee have little to add in regard to it. It is a fair grape, but, like the Hartford Prolific, drops off, which is a very serious objection to any grape. Francis Dana, who is the most successful of all men in producing new and valuable varieties of fruit, placed on our tables again this year, a seedling grape, which he has named the Dana, which attracted considerable atten-The best pomologist of our Society, after having carefully examined and tested it, said it was the Rose Chasselas, -high praise certainly. The bunch was of medium size. shouldered, rather compact, with a peculiar red stem, the berries of rather large size, nearly round, red, with a rich, heavy bloom, so that when fully ripe they appear almost black; as free from pulp as the Delaware; not so sweet, but more spirited and vinous, and yet not an acid grape. the 20th to the 25th of September, and that not under the This fruit was shown again most favorable circumstances. December 24th, in a fine state of preservation, retaining its flavor to a good degree, thus seeming to possess the longkeeping qualities of the Diana. We consider it a promising variety. The same gentleman also exhibited another new seedling which he calls the Nonantum. This is a black grape, bunch rather small size, as it appeared this year, shouldered,

berries of good size, oval, similar in shape and appearance to the Isabella; entirely free from pulp, being quite remarkable in this respect: good flavor, promising: some preferred it to the former sort. Time of ripening about the same as the other. Some of your Committee had the pleasure of visiting Mr. Dana, and seeing these vines bearing their fruit, and we do not hesitate to sav. that the specimens shown this year were grown under unfavorable circumstances, so far as relates to the situation of the vines; they growing thickly among other vines and trees, which leads us to believe that under more favorable circumstances even better results would be attained; yet the past season having been so favorable to the ripening of the grape, it is hardly wise to give a more decided opinion based upon the product of this single year. seedlings were shown by the same gentleman, but none of them seem to be worthy of particular notice.

There were some ten or eleven seedling grapes sent us from Troy, N. Y., by H. W. Green, said to be seedlings raised by a Mr. Thompson. Though they were not all in the best condition, yet it seems to us that none of them can be of great value. No. 1 seemed to be the Sweetwater reproduced, and no improvement on that foreign sort, which cannot be successfully cultivated out of doors. No. 2, had the texture of an unripe Black Hamburg, with some mildew upon it. not of pleasing appearance, and from the specimens sent cannot say much in its favor. It seems to be a seedling from some forcign sort. No. 3, was like the Catawba in color, size and shape; rather late. No. 4, seemed to be the Isabella reproduced, with no improvement, even if equalling the parent. Nos. 6, 7, 8, 9, 10 and 11, were all similar to No. 4; so that no person could distinguish them by the fruit. These grapes reached us on the 29th of October, and most of them were fully ripe, but we cannot believe them to be of much value to the public. Parker Barnes exhibited a scedling grape for the first time, which was grown under unfavorable circumstances: bunch rather small, berry medium size, color black, early, and sweet; superior in quality to the Hartford, worthy a further trial on account of its earliness; ripe early in September.

There have been other seedling grapes shown, none of which seemed to be of much value. The older sorts, such as Catawba, Isabella, Diana, Concord, Delaware, Union Village, and Rebecca, were shown in great perfection by B. B. Davis, C. E. Grant, M. P. Kennard, F. Dana, K. Bailey, S. Weld, A. J. Dean, J. W. Manning, and J. F. C. Hyde. No one contributor has done so much as W. C. Strong, to whom our thanks are due for his efforts in introducing new grapes, and for the successful growing of the older varieties.

No subject is attracting more attention among Horticulturists than that of the grape. And it is believed by many, that the time will come, if it has not already arrived, when grapes may be grown as successfully as pears, or any other fruit. It is certainly one of the most valuable, for it can be preserved with care for months, tending to promote health, and greatly adding to our enjoyment. Grape culture is rapidly extending throughout the country, and the time is not far distant when all the wines that we need will be produced in our own country, and when grapes will be within the reach of all.

How cheaply they can be produced in this State and pay the producer, is a question yet undetermined, but it is in a fair way of being solved. Thus far, sheltered side hills with a southern exposure have been selected, and such a location. without doubt, is the best that can be found, provided it can be suitably prepared. It is said that any soil that will produce good corn will be suitable for grapes; however that may be, we find by experience that they prefer a warm and somewhat dry soil, rather than a cold and wet one. There is yet a great difference of opinion as to how the ground should be prepared to set a vineyard. In setting some five hundred vines in one lot we have made no other preparation than we should for corn, simply plowing the land deeply, and manuring well with well-decomposed manure. That it will in the end be a good investment to trench the land well and put in drains, if the land is inclined to be too wet, we have no doubt. No one should plant a vineyard with the expectation that grapes can be produced as easily as they have been the past year, but that seasons will come when they will have mildew, rot, injurious insects in abundance, and many other things to

contend with. The robin is a great pest to the grape grower, often destroying a large part of the crop. It is astonishing to see how they will congregate in and about a vineyard, all bent upon the destruction of the fruit. This will prove a serious drawback to the successful cultivation of the grape, unless the law protecting that bird is repealed, and the birds are killed off. Great improvement has been made in the varieties of grapes within a few years past, but there is still room for more. Some fortunate individual is yet to give us a grape much earlier, larger, of better quality, more hardy than any we now have."

SCALE INSECTS ON PEAR TREES.

BY J. S. HOUGHTON, PHILADELPHIA.

THE scale insect, or bark louse, on pear trees, has been very troublesome with me the past season, requiring several weeks of patient labor for one man to go over the affected trees of a large orchard, with a pot of strong soda wash and brush, with the hope of effectually reducing their numbers. I am inclined to think, that, like nearly all insects, they increase much more rapidly in a hot, dry season, than in one which is cooler and more rainy, as I am sure that they have spread most astonishingly the past summer. I usually paint all the trees which seem to be affected by the scale, every season, with strong soda water and whale oil soap, and have supposed it to be effectual in destroying the insects. But it may be that I have been mistaken, and that I have not really killed them. The strength of this solution which I use, is whale-oil soap mixed to a thin paint, with the addition of about two pounds of ordinary washing soda, (sal seda or soda carb.) to a gallon of the mixture. To this I sometimes add a quantity of Scotch snuff, a little spirits of turpentine, and some sulphur, if I have any of these substances at hand. I have also added to the solution of soda and whale-oil soap, two large handfuls of chloride of lime to a bucket of mixture. The chloride of lime I think useful, as it is a powerful cleansing agent, it increases the caustic power of the soda, and it sticks to the branches, leaving them for a time white, just as common lime-wash would do, showing very plainly whether or not the trees have been faithfully painted by the person who does the work.

But with all my care and labor, the scale insect seems to spread most annoyingly. I have not looked for it on the leaves, but I believe it will fasten itself there. I have, however, seen it quite thickly sprinkled on the fruit, not only on my own trees, but on other fruit, in market and elsewhere.

As I understand it, the male of this insect, (the coccus), is very minute in size, almost invisible indeed to the naked eye, and flies from tree to tree, while the female, (the scale which is seen on the tree), never flies, but lays a brood of eggs under her shell or scale, and dies. Kollar, the well-known German writer on insects, says it is very difficult to destroy the scale insect by washes which will not at the same time injure the tree. I have always supposed the soda wash effectual. Before applying it, a quantity of blood may readily be produced by mashing the scale with the blade of a pruning knife, but after the use of the paint, the scale appears dry and bloodless. If the larger portion of them be killed by the wash, the balance must have astonishing powers of breeding to increase so fast as they appear to do in a single season.

That the scale is certain destruction to pear trees, if permitted to breed undisturbed, I have no doubt. I should suppose that an animal might as well try to exist with a million of gallinippers sucking its blood, as a tree covered with these sapeaters.

I should be very much gratified to learn, whether, in the experience of others, it has been found necessary to do more than wash the trees with strong soda to get rid of the scale, or if it is necessary to rub them off with a hard brush. If the hard brush is needed, it must be a formidable job, and many fruit-spurs would be destroyed in the operation.

THE GARDENS OF ROME.

BY H. H. HUNNEWELL, ESQ.

In our last number we presented our readers with a very interesting letter from Mr. Hunnewell, giving an account of his visit to the Isola Bella. We now have the additional gratification of giving another extract from a very recent letter of the 7th of January, containing a notice of the Gardens of Rome. Ed.

Although I have been so busy and much interested in seeing the curiosities of this wonderful city, its horticultural attractions have not been entirely forgotten; and, as you may suppose, I have not failed to visit all the gardens here of any great reputation. With few attempts at landscape effect, their chief interest consists in the peculiar Italian mode of treatment generally adopted,—in formal walks, a great profusion of artistic decorations, such as statuary, vases, arcades, terraces, rockwork, grottoes, and fountains of every form and variety, with such an abundance of water that there is no occasion to watch them for fear of the supply being exhausted before your visitors leave you. Some of the designs are wonderfully fine, and I only wish we could see more of them in our own country, and that more have not been introduced at the Central Park, for instance, where they have so much water at their command, and where so large a proportion of the many millions spent has been appropriated to grading and blasting rocks, and not much appreciated. At the Villa Pamfili-Doria, a short distance outside the walls of Rome, the waterfalls and cascades are very numerous and fantastic, and, with the simple jets and ornamental fountains, are prominent features, and add much to the beauty of the These gardens, belonging to the Prince Doria, which are most liberally thrown open at all hours and seasons to the public, combine more of interest, I think, than any others I have seen, though they suffered somewhat from being occupied, in 1849, by Garibaldi's troops, who, after several weeks, were driven out by the French under Gen. Oudinot, and a

monument has been erected on the spot to the memory of those killed on that occasion.

The approach over an uneven surface is quite imposing. bordered a part of the way by a hedge of century plants, and part by a double row of evergreen oaks, and, after reaching the house, is continued along two or three miles through the park, with occasional views of the open country, of Rome, and a pretty sheet of water, with its numerous cascades, &c. The variety of trees is very great. Some fine live oaks, mutilated, however, as usual by having been frequently headed in to cause a more dense shade, I presume, in the same manner as the mulberry is cut back, to promote a more vigorous growth of foliage for the silk worm; and a plantation of the Pinus pinea, with their tops so flat you would think, at a distance, you could walk on them. But the most striking feature, to one accustomed to our cold region, is the immense quantity of out-door exotic plants, such as aloes, yuccas, palms, cactus, and orange trees planted as hedges, in vases, in large clumps, or occasionally as fine single specimens. know of nothing more effective than a palm, 15 to 20 feet high, as seen here in the centre of a grass plot. From the villa on the entrance side, you have a good view of St. Peter's, through an opening of evergreen oaks; and from the other you look down some fifteen feet below you on to a parterre flower garden of considerable extent, decorated with statues, vases, and a large fountain, and laid out in fanciful beds, some very ingeniously imitating names, as "Mary," and peacocks by means of box edging, different colored gravel, &c.; and beyond that, you have three or four acres laid out in the English style, with some nice trees and shrubbery. I noticed hundreds of Camellia japonicas, some of which were in blossom, and all covered with buds, with a fine rich healthy foliage, the climate being so mild that only the most choice are protected by a slight roof of straw mats, which, with us, might possibly remain 24 hours, but here they answer the purpose, as there is seldom wind enough to extinguish a lighted candle, and this also enables them to stand pots of flowers about on window sills, balconies, around door steps. &c., as is seen in great numbers. Here, too, as everywhere

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else where I have travelled, there is a wonderful and happy absence of all insects, no rose bugs or green flies, red spiders or caterpillars, discouraging and thwarting the labors of the most zealous cultivator.

One of the finest sights I ever witnessed in a horticultural way are the orange trees here, which are now loaded down with fruit just ripe-one variety, called, I believe, the Roman orange, bearing a small, thin-skinned, sweet fruit, being perfectly hardy; but the Sicily orange requires a little protection, and for that reason is generally planted under the terraces, so that a temporary roof is easily extended over them for a couple of months in mid-winter, and they do not ripen their fruit until April. So far there appears to have been no severe frost here, as the grass is green; there is an abundance of roses, with some other flowers, though not as many as I should expect under such favorable circumstances. At this place they use with great effect, in decorating their balustrades. vases filled with the California Opuntia, a rank-growing cactus, three or four feet high and nearly as many thick. the walls, covering several hundred feet, I noticed the German ivy in blossom, and looking exceedingly pretty; likewise the English variegated ivy, very ornamental. The pampas grass seems to be very generally disseminated everywhere; planted in great masses it grows very luxuriantly, throwing up to a great height numerous blossom stalks, which remain in flower several months, and is very showy.

Attached to the Quirinal Palace, on Mount Cavallo, where the Pope resides during two or three of the first summer months, and from whence Pius 9th was obliged to fly in 1849, when the palace was invaded by the mob, is a garden of some considerable extent and kept in very good order. One portion is laid out in the usual manner as a flower garden; another with straight alleys bordered by clipped evergreen oaks, or hedges of box and laurel at least twenty feet high, affording some fine vistas and a dense shade, which must be very agreeable in hot weather; and a third portion as an English garden, all decorated as usual with any quantity of sculpture and fountains, with an abundance of water all over the grounds; and there is also some topiary work made out of the pyram-

idal cypress, looking very much like champagne glasses, eight to ten feet high. In a very lofty grotto, ornamented with fresco paintings and statuary, an organ is played by the water, and as you stand admiring some statuary, a great quantity of fine water jets spout out from the ground all around you, and in several other places the same device is repeated, so one runs the risk of a pretty good shower bath, unless he has been forewarned of the reception he is like to meet in his visit to the gardens of his holiness. Considering that these gardens have been in existence upwards of 200 years, the trees are not as large as one would expect; indeed, I saw no one that appeared of great age. I noticed a few fine specimens of the Cupressus glauca and torrulosa, some Deodar and Lebanon cedars, Wellingtonias, and a Mahonia trifoliata. Of course, plenty of aloes, cactus, and different varieties of palm; one, the humilis, 20 to 25 feet high; fine Yucca gloriosa, and a Draconis, 12 to 15 feet high. There were some 200 large orange trees in pots for decorating the grounds; a good collection of greenhouse plants, with a fine range of pine pits, some just ripening, the gardener telling me he kept up a constant supply all the year; also strawberries under sashes, in blossom. So it seems the good things of this world receive due attention at the Vatican, as well as politics and church matters!

. I have visited several other villas, such as Borghese, Albani, Ludovisi, Torlonia, &c., but these places are not generally in high keeping, and are interesting from their valuable collections of works of art, rather than from any floral attractions.

On the Pincian Hills is a public garden much resorted to by strangers and the Romans, being the fashionable walk and drive. They are of small extent but well kept, and planted with some of the more rare trees and plants, and from a terrace there you have a most splendid view of the city.

Although there does not appear to be a great variety of trees about here, still there are some besides those already mentioned which have attracted my attention, and are not seen with us. The Schinus molle, a graceful, drooping evergreen tree, is quite common about the city, and is very ornamental; but the most magnificent one I have met with is the

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Phytolacca dioica, an Australian evergreen, I believe, of large size, resembling somewhat the Magnolia grandiflora, but the foliage is of a lighter green. The Acacia longifolia is a very lovely tree. A large evergreen shrub, called the Stranvæsia, covered with large bunches of scarlet berries, is very showy; and there are several varieties of the Clematis covering the numerous walls, now in blossom, which are very pretty. But one of the most singular-looking objects is the Cereus dodecaden, which is quite common, and you see them frequently 15 to 20 feet high, producing a very strange effect.

DESCRIPTIONS OF SELECT VARIETIES OF PEARS.

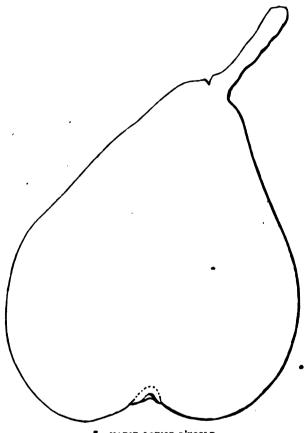
BY THE EDITOR.

We add to our already large list of fine pears, descriptions of the following varieties, two of which have fruited in our collection the last two years, and appear to be valuable additions to our gardens.

231. MARIE LOUISE D'UCCLE. Belgian Catalogues.

Among a collection of new pears received from Belgium in 1858, embracing all that had appeared in the Catalogues up to that date, was one under this name. It was raised by M. Gambier, and was announced as a fruit "as large as Beurré Clairgeau, very melting, and a productive and hardy tree." Under the moderate culture which new varieties ordinarily receive with us, and the crowded condition of the trees, it has not probably shown its real merits. It first bore in 1863, when the fruit was of only medium size; but last year the specimens were much larger and finer, and gave evidence of a large, productive, and excellent pear. The fruit greatly resembles the B. Clairgeau in shape, but instead of the yellow skin and glossy cheek of that handsome pear, it is more or less russeted, throughout, showing in patches and streaks its pale yellow ground. It ripens in October. tree is an upright and regular grower.

Size, large, about four inches long, and three in diameter; Form, obtuse pyramidal, or ovate pyriform, swollen on one side, uneven in outline, largest about the middle: Skin, rough, yellowish green, becoming yellow at maturity, and interlaced throughout with thick russet, thickest about the crown:



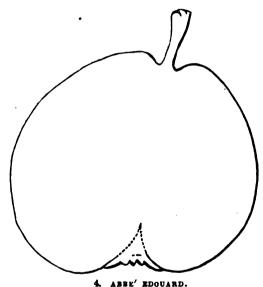
3. MARIE LOUISE D'UCCLE.

Stem, rather long, about one inch in length, stout, and very obliquely inserted under a much swollen base, with a slight cavity beneath: Eye, medium size, nearly closed, and slightly depressed in a shallow puckered basin; segments of the calyx small, narrow, very sharply pointed, stiff, incurved: Flesh, yellowish white, little coarse, melting, with a sprightly vinous,

juicy and pleasant flavor: Core, large: Seeds, rather small, sharply pointed, dark. Ripe in November.

233. L'ABBE' EDOUARD. Album Pomologie, Vol. IV., p. 69.

This is one of the many seedlings of the late Dr. Van Mons, and was found in his nursery, and cultivated by Bivort, in whose garden it first fruited in 1848. It was received as No. 2015, of the Van Mons Collection, and Bivort supposed it may have been distributed by him to his friends, under that number. The late R. Manning and Wm. Kenrick received from Dr. Van Mons, in 1834 and 1835, nearly two



hundred kinds of pears, under various numbers, but few were higher than 1600; the probability is that it was never disseminated until after it fruited with Bivort.

This variety has borne in our collection for three or four years, and though a pear of hardly medium size, it has kept so well, and came in at so good a season, that it appears likely to become a valuable variety. Our collection of new sorts is crowded into a small space, and, as we have already remarked, the fruit has little chance of showing its real size. What we desire to learn is the quality of the fruit, trusting

that when this is ascertained, better culture will develop other desirable qualities. The Abbé Edouard ripens late, keeping into January. Tree pyramidal, of handsome growth.

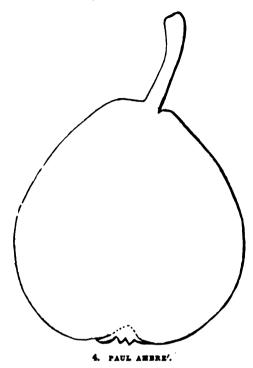
Size, below medium, about 2½ inches long, 2½ inches diameter: Form, obovate, broad, and somewhat flattened at the crown, obtuse at the stem, slightly swollen on one side: Skin, fair, smooth, greenish, becoming yellowish at maturity, mottled with dull russet, tinged with pale red in the sun, and dotted with conspicuous russet specks: Stem, short, less than half an inch long, rather slender, and inserted in a small shallow cavity: Eye, large, open, and rather deeply sunk in a large, open, moderately deep basin; segments of the calyx long, entire, expanded: Flesh, white, rather coarse, half melting, very juicy, sugary, with an agreeable perfume: Core, large: Seeds, large, broad, roundish, ovate, brown. Ripe in December, and keeps into January.

234. PAUL AMBRE'. Downing's Fruits and Fruit Trees.

Our specimens of this pear were given to us by Messrs. Ell-wanger & Barry of Rochester, N. Y., in whose collection we saw the tree in full bearing last September. The tree was vigorous and healthy, of erect growth, and produced a full crop of such smooth, good, fair fruit, that we brought some home with us, from one of which our drawing and description was made. It is, we believe, one of Bivort's seedlings, or, like the Abbé Edouard, one of the trees found in the nurseries of Van Mons, after his death. We do not, however, find it described in the volumes of the Album Pomologic, and think it of more recent introduction to notice. Though not a large pear, it is of regular form, smooth and handsome, and possesses a sprightly refreshing flavor.

Size, medium, 2½ inches long, 2½ inches diameter: Form, obovate, regular, narrowing to the crown, and rather obtuse at the stem: Skin, fair, smooth, yellowish at maturity, with a broad, pale red cheek in the sun, and covered with minute russet dots: Stem, medium length, about one inch long, rather stout, and obliquely inserted without any cavity, but surrounded with a few uneven and slight projections: Eye, large, open, and but slightly depressed, in a very shallow,

smooth basin; segments of the calyx very long, narrow, entire, reflexed: Flesh, yellowish white, little coarse, with a



pleasant sprightly refreshing juice, and agreeable flavor: Core, large: Seeds, large, flattened, long, pointed. Ripe in October.

CULTURE OF MARANTAS.

FROM THE ILLUSTRATION HORTICOLE.

The Marantas are a beautiful class of plants, remarkable for the elegant and diversified coloring of their foliage, rather than the size, or brilliancy of their blossoms. One of them, the Zebra plant so called (Maranta zebrina), is tolerably well known, having been grown in our collections for a long period, and, when well treated, is still one of the most showy

and decorative objects, either for the hothouse in winter, or the conservatory or lawn in summer; its ample foliage, distinctly marked with dark and light green, in zebra-like stripes, from whence its specific name, forms a broad, massive, and effective object.

But it is only within a few years that the researches of botanical travellers, who have penetrated the interior of South America, have brought this tribe into more especial notice, and enriched our collections with numerous species, not perhaps individually more striking than the old kind, but of dwarfer stature, and very different in the size as well as the coloring of their leaves; some being green, with silver lines, others green with golden lines; some with purple or bronzy tints, and others of various shades, but all ornamental, and forming highly decorative or picturesque objects, mixed in with a collection of flowering plants.

Consequently the rare and newer kinds are not common in our collections, and where they are introduced they are often badly treated, and are anything but the really splendid objects they should be. This is owing to ignorance or neglect of their culture, for though this is by no means difficult, it still requires to be founded on a knowledge of their natural habits, upon which alone the whole tribe, as well as many other plants, can be grown to any degree of perfection.

The French and Belgian cultivators, through whom the new species have been disseminated, knowing their requirements, cultivate them extensively, and in the highest condition, and a late number of the Illustration Horticole has a paper upon their growth, by M Verschaffelt, the editor, who has not only a large number of species, but has been awarded numerous prizes for his skill in their culture. Our amateurs will therefore be pleased to learn his mode of treatment, which is as follows:

The Marantas or Phryniums have acquired, at the present time, a great and legitimate reputation; a reputation which these plants merit, not for the beauty of their flowers, which are quite insignificant, but for their foliage, always ample, velvety or glossy, often two or three colored, and beautifully ornamented with stripes or bands, or with variegations, brightly colored or silvery.

Their culture, without presenting any real difficulties, yet requires particular care, and constant attention. The following is the manner in which we have successfully cultivated our plants: Originally from the warm regions of Asia (as from its archipelagoes) and from Central America, these plants, not yet so extensively cultivated as they should be, require, in the climate of Europe, the shelter of a hothouse, where they can have shade and a slightly humid atmosphere during the warm season, yet requiring almost constant ventilation, at least during the heat of the day; ventilation, it is true, is a positive necessity, and at the present day is understood by the most skilful gardeners, not only for the preservation of plants, but to facilitate, in forcing, a vigorous growth, and at the same time to preserve the health of the gardeners who have the charge of the hothouse.

Like the generality of plants, they require annually a period of repose. We can easily recognize this, by the drying up of the floral scapes, the cessation of growth, and the yellowness of the lower leaves. When this takes place, watering should be more moderate, or almost entirely discontinued, and the plants removed to a cooler house, where the air, the light, and the sunshine even, slightly subdued, can circulate freely around the pots. Here they may remain until they again show signs of growth. The plants should then be turned out of the pots, the earth lightly shaken from the roots, freeing them from all dead or decaying parts, which should be neatly cut away with a sharp budding knife. If young plants are wanted, the little clusters of shoots which are now forming, should be separated, taking great care not to injure the main root stalk. All are then to be well potted and removed Here they soon grow and thrive well, to the hothouse. especially in company with the orchids, the ferns and arads.

The soil which suits the plants best is heath earth, passed through a coarse riddle, or, what is better, leaf mould, well decayed, to which should be added a third part of horse or cow manure, equally well rotted, avoiding all other compact earths, such as loam, fresh earth, and especially clay or alluvial

soil. The pots in which they are potted should be very large (proportionately, that is, without reference to the size of the plants) and not very deep, well drained, with fragments of pots or bricks, or tiles finely broken. This kind of pot is necessary, as the plants have long, fibrous roots, slightly hairy, and spreading more or less horizontally, taking root in no other manner. In consequence of this kind of rooting, it is necessary for the Maranta to extend its roots freely, and their creeping, under-ground stolones, which they readily produce from the central stalk.

To speak of this mode of subterranean growth, is to indicate that of their multiplication, which we have given above; we do not reckon at all on their producing seeds. This very rarely happens, if it is not quite improbable with us. Besides, the result of this mode of propagation would be altogether too slow, compared with that to be obtained by dividing the roots.

The mode of watering the plants is a matter of no little importance. A syringe, with a very fine sprinkler, so as to throw it over and under the leaves, is to be preferred to watering immediately upon the roots. The water should be pure rain water, and of the same temperature of the house.

We have, perhaps, omitted some details. These, however, the skill and good judgment of the cultivator will readily supply.

FLORICULTURAL NOTICES.

NEW CALADIUMS.—We seem not unlikely to be, says the Gardeners' Chronicle, as much overrun with new Caladiums as we were with variegated Begonias. There will be this advantage in the one case, as in the other, that we shall all the sooner set about selecting from amongst old and new, a few of the very choicest, for general cultivation, and consign the rest to oblivion. Caladiums, after having made a start in the conspicuous importations from Para, which took place a few years since, are now being hybridized, and seedlings are

being produced, though not perhaps in such numbers as was the case with the Begonias in their brief day. We are not, indeed, in the secrets of the raisers as to the origin of the most recent kinds which have found their way into commerce, but we are not without suspicion that they are rather to be attributed to Paris than Para,—to the plant hybridizer rather than to the plant importer. We have lately received specimens from Mr. Bull of some varieties of professedly hybrid origin, which go to confirm this suspicion. Of course the true beauty of these novelties can only be brought out by the highest cultivation, and even then it will be necessary to see the best old sorts in the same highly grown state, before any certainty as to which are the best varieties can be answered. So far as appearances go, one called Chantinii fulgens, from . having the red coloring arranged in more dotted lines, and the white flecks more evenly distributed, may prove better than its old namesake. Another, called Lamartine, marked in the same way, only with red instead of white flecks, looks distinct, and will probably be effective. A third, Mad. Andrieu, has red ribs, with a few reddish flecks distributed over the central portion of the leaf. These, we are informed. are hybrids from C. pœcele, fertilized with Chantinii. Another, called Duc de Morny, raised from pœcile, fertilized with Verschaffeltii, has the whole central portion of the leaf blade of a deep crimson. Verily, there is work for the Floral Committee to collect and test the numerous varieties.

803. GENETHYLLIS FIMBRIATA Kipp. THYME-LEAVED GENETHYLLIS. (Myrtaceæ.) South West Australia.

A greenhouse plant; growing one foot high; with pink bract; appearing in spring; increased by cuttings; grown in light heath soil. Bot. Mag., 1864, pl. 5468.

"A lovely shrub, as all the species of this genus are," but rarely seen in American collections, owing, probably, to want of care in the treatment of the plants. The present subject was discovered by Mr. Drummond, but was not sent to England till recently, when it was added to the collection of Messrs. Veitch. It has an erica-like habit, and the flowers are small and insignificant; but these are produced on the ends of the branches, and are covered with beautiful pink bracts or scales, which resemble a large drooping bell-shaped flower. (Bot. Mag., Sept.)

804. HIPPEASTRUM PROCERUM Duchatre. QUEEN OF BRAZIL'S HIPPEASTRUM. (Amaryllidacem.) Brazil.

A greenhouse bulb; growing three feet high; with illac flowers; appearing in winter; increased by seeds; grown in light rich soil. Ill. Hort., 1864, pl. 408.

A new and very handsome Amaryllis, or Hippeastrum, found on the Oregon mountains, and two bulbs sent to the Imperial Horticultural Society of Paris, and two to Mad. Furtado at Rocquencourt, near Paris, in whose collection it flowered last January, producing a stem with four blossoms. It has a rather tall stem, surmounted with its large leaves, from the summit of which appears the flower stalk, with four or more flowers, of a delicate pale lilac. It is increased by seeds, and requires the same culture as the Amaryllis. (III. Hort., Aug.)

805. ACHYRANTHES (?) VERSCHAFFELTII Hat. VERSCHAFFELT'S ACHYRANTHES. (Amarantaceæ.) Para.

A greenhouse plant; growing two feet high; with purple foliage; increased by cuttings; grown in light rich soil. Ill. Hort., 1864, pl. 409.

Another of the beautiful acquisitions of M. Baraquin, the collector of M. Verschaffelt, who found it in Para and sent it to him. It is an ornamental foliaged plant, of rare beauty, and its name not yet fully determined, though there is little doubt it is an Achyranthes, and allied to the Amarantus. The habit is erect with diverging branches, and roundish leaves of a coppery brown, and shaded with blood purple, with veins of a bright crimson, rivalling, in its admirable admixture of colors, anything that we at present possess. As it will grow vigorously, and flourish in the open air in summer, it will undoubtedly prove one of the most distinct and popular of dark foliaged plants. (Ill. Hort., Aug.)

Societies.

PENNSYLVANIA HORTICULTURAL.

At the recent Annual Meeting of the Society, the following officers were elected for 1865:—

President, D. Rodney King.

Vice Presidents, James Dundas, M. W. Baldwin, Caleb Cope, Robert Buist.

Corresponding Secretary, Thomas Mechan.

Recording Secretary, A. W. Harrison.

Treasurer, Henry A. Dreer.

Professor of Botany, Thomas P. James.

Professor of Horticultural Chemistry, James C. Booth.

Professor of Entomology, S. S. Rathvon.

The Society appears to be in a flourishing condition, and at a meeting January 17th, a Committee was chosen "to raise a fund by subscription for procuring a lot in a central locality, and erecting thereon a suitable Hall for the use of the Society," the said Committee, if they meet with the desired success, to also ascertain and report the locality, price and terms of lot, and estimated cost of erecting the building, and report at a subsequent or special meeting. The President was appointed Chairman of the Committee.

The Society will have a grand Horticultural Banquet, July 4th, the place of meeting and order of arrangements of which will be hereafter announced. They will also hold the Autumnal Exhibition on the 27, 28, and 29th of September next.

Massachusetts Forticultural Society.

Saturday, January 7, 1865. The quarterly stated meeting of the Society was held to-day.

The President called the meeting to order, and delivered his Annual Address, as follows:

GENTLEMEN OF THE MASS. HORT. Soc. :-

Once more we have come together at the incoming of the new year, to renew our fidelity to the cause of Horticultural Science, and give the assurance of our deep interest in everything that concerns the present usefulness and future prosperity of the Society.

Notwithstanding a somewhat unfavorable season, dry almost beyond recollection, and the partial or almost entire failure of some kinds of fruit, the Exhibitions of the Society have been well kept up, the interest in them unabated, and the specimens of fruits and flowers, as well as vegetables—all good—have, in some instances, excelled those of former years. The apple crop, as the Chairman of the Fruit Committee has informed you in his most excellent report, read at the last meeting, was almost an entire failure in this part of the country, and he indulged in some forebodings that, owing to the many enemies of this valuable fruit, its culture was likely to diminish from the uncertainty of the product. I trust and hope that his fears are unfounded, and that we shall yet see large and thriving orchards

taking the place of the worn out and decrepit trees, which, it must be admitted, now disfigure the fair landscape in our own immediate neighborhood.

Though I am no advocate of the theory of the wearing out of varieties, I have no hesitation in saying that the trees themselves will eventually go to decay; and no orchardist, who has any knowledge of the subject, will fail to take early measures to provide young and healthy plantations to supply the place of old and enfeebled trees. Because they once flourished well, and yielded profitable crops, it must not be supposed that the yield will be perpetual. Yet this is the general expectation, and when, from a combination of causes, such as neglect of cultivation—want of manure—judicious pruning—cleanliness of the trees—insects, &c.,—they fail to give the supply of earlier days, orchards are pronounced valueless, and the loss of the crop laid to innumerable evils, wholly under the control of the cultivator. We shall regret to see any less attention given to apple culture in any part of our State.

The pear, fortunately, has proved a most valuable and reliable fruit, and few who have attempted its culture have failed to reap a fair return. It is not subject to the attack of that pest, the canker worm, nor has it any enemies in this latitude, unless we except the blight, so called, which has been so destructive to the trees of your late President, Mr. Breck, who has given you some account of his losses. Happily it has yet affected but few plantations, and it is hoped it will not become an epidemic, as it has in Western N. York, where thousands of trees are yearly destroyed, even in the nursery rows.

This noble fruit has a very clean record with us, and the past year our markets have been well supplied with pears of very fine quality, and our Exhibition tables have been filled to overflowing with the choicest specimens of our amateur and professional cultivators. While a small space was sufficient for the generally inferior specimens of apples, the broad and lengthy tables at our Annual Exhibition were unable to accommodate the numerous pears; and, while we regret the loss of such a fine display of the former fruit, as in days past enriched our tables from the orchard of one who no longer holds concourse with us, we are proud to see the pear, so often pronounced, and still asserted to be, an uncertain fruit, fulfilling the expectations of the ardent cultivators who have devoted years to encourage, by the exhibition of superior specimens, and the introduction of the choicest varieties, the more extensive culture of such a delicious fruit. Your Fruit Committee, acting in concert with the views formerly expressed by me. have, by the alteration of their premiums, done much to bring out the real qualities of many favorite kinds; and I am glad to learn that now we have the prospect of abundant space, they propose to introduce, into their schedule of prizes the present year, some liberal premiums for the largest and best collections of the pear. Gladly do I announce this, and I look forward to another of those great displays, which once made our exhibition the attraction of Pomologists from all parts of the country, and gave us the high reputation, so well earned, of widely disseminating a knowledge of its excellencies.

MARCH. 89

How rich has been the display of Grapes! We no longer turn from the meagre show of native sorts, to gloat over the rich clusters of foreign varieties; but rather satisfy ourselves that the latter are well enough of their kind, while the former rivet our attention. Indeed what can be more interesting to the lover of good fruit, than the rich blue bloom of the noble Concords—the compact clusters of the rosy-tinted Delawares—the amber hue of the delicate Rebeccas—the transparency of the luscious Allen's Hybrid, or the pinkish berries of the spirited Iona? How great the change within the remembrance of the youngest member of our Society! and how vast that within the recollection of its pioneers! They did not dream of such progress. That our Society has been instrumental in bringing this about, is a source of the highest gratification. Let it be an incentive to still further energies to make known the best grapes, and reward with liberal premiums those who are active in bringing forward new varieties of this delicious fruit.

I have been gratified, no doubt in common with every member who heard the sport already alluded to, to hear the Chairman advocate more attention to that healthy and valuable fruit, the Strawberry. He has truly said that, though some splendid berries have been exhibited the past year, the show, on the whole, was meagre, and by no means what such an exhibition should be by the Massachusetts Horticultural Society. The premiums have been very liberal, yet the small association of a neighboring town has far excelled our metropolitan display. This should not be; and we trust the present year, and in future years, our new Hall will be made, during the beautiful month of June, redolent with roses, and fragrant with the odor of huge strawberries, now more to be compared with plums and peaches than with the smaller fruits.

It is gratifying to see the peach once more upon our tables in greater abundance, and I hope the interest now increasing, in regard to orchard-houses, will make this luscious fruit more prominent hereafter. The liberal premiums offered for the best peaches and grapes from pot culture, by Wm. Gray, Jr., Esq., are to be awarded this year, and this alone should bring out many superior specimens. When these are seen, and it is understood how simple is the method of producing them, there will doubtless he hundreds of amateurs and gentlemen who will enter into the culture of the peach, now so uncertain in our variable and often severe climate.

Of the numerous flowers which have ornamented our tables it would be impossible to particularize in these brief remarks: but I ought to allude to the Gladiolus, as showing how much can be done to render us comparatively independent of foreign aid, in our collections of plants and flowers. It is only within four years that any attention has been given to the raising of seedling Gladioli; yet the results have surpassed all that we have heretofore had from abroad; true, the French have given us the material to work with; and they had the same; but they have not come up to our standard. All this shows that the same efforts directed to the growth of the rose, the peenry, the rhododendron, the azalea, the lily, and other plants, will un-

doubtedly produce like results. With such direct and positive evidence of what has been accomplished with the Gladiolus, should our cultivators rest contented with the laurels already won? The answer may be that the flowers we have named require, some of them, years before their merits can be known, while the Gladiolus gives a quick result. This, however, should be no bar to the attempt at success.

Time will not allow me to say all I could wish under this head. The future is enveloped in mystery, but we may indulge the hope, that, encouraged in their efforts, as we are sure all cultivators will be, by the aid of our Society, with the liberal assistance of our zealous amateurs, in bestowing generous premiums for menitorious specimens, our gardens and grounds will be enriched with magnificent objects, the result of intelligence and skill, directed to the improvement of the Creator's works.

From this slight review of what the season has developed, I turn more immediately to the condition and prospects of the Society.

Prosperity has attended all our efforts during the past year. Since January last, 142 new members have joined the Society; these, with 52 the previous year, make a total of 195 members in two years; nearly one half have become life members. Deducting withdrawals, which have been few, and deceased members, the present total number is 704.

Numbers alone often add but little to the real usefulness of a Society, though, in an association like ours, it is gratifying to have the sympathy and countenance of all; and it is pleasant to be able to state that a large part of the increase of last year, embraces real lovers of Rural art, and many of them amateurs or professional cultivators, who will take pleasure in being contributors to our exhibitions, and have a laudable pride in excelling in the products of their skill.

The finances of the Society exhibit a condition which will be cheering and satisfactory to every member. Our total wealth on the 1st of January, 1864, was \$198,160.35, with \$102,500 available for the erection of a new building. Of this, \$53,100 have been already expended in the construction of the edifice; and adding our present resources, the Treasurer informs me that the total means of the Society, for the erection of the building on the 1st of January, 1865, were \$104,604.54, showing a gain, notwithstanding large taxes, insurance, &c., of \$2,100.

Mount Auburn gives us, for the last year, the handsome sum of \$7,500, the largest amount we have ever received from this source. As the committee upon the purchase of the Montgomery House estate did not estimate the average above \$5,000, this is a gain upon their estimate.

The erection of the new Hall has progressed most favorably. The corner stone was laid on the 18th of August, and the building is already roofed-in and ready for interior finishing. The summer has been dry and favorable for building, and it is believed a more substantial structure has not been erected in our city. The exterior design needs no comment from me, and the interior accommodations are already apparent to every member who may choose to examine them. It is the general impression that the two halls will be ample to afford all the space the Society now needs, or will

ever require, and the proportions are such as to greatly enhance the effect of our exhibitions.

As regards the financial bearing of our enterprise, it is the confident belief that it will enable the Society to obtain all its own accommodations free of expense. The corner store on Bromfield street has been leased, and there are several applications for the corner store on Montgomery place, as well as for those on Bromfield street, and from the present increased value of rents I think I may safely say the gain will considerably exceed what was considered at one time the rather enthusiastic ideas of some of your Committee.

We are informed by Mr. Bryant, the architect, that we can without doubt have the building completed by July 1st next, perhaps before that period, but not in time to be available for our spring or opening exhibition. We entertain the hope it will be ready in June, when its dedication can take place in connection with the rose show. It would be highly gratifying, it appears to me, to have that occasion occur when the most beautiful flowers of the garden, and especially the "Queen" of Flowers, as well as we hope the Flowers of Rhetoric, may delight and quicken our perceptions of Nature's loveliest works. It will be for you, gentlemen, to take such early action in the matter as will render the event creditable to us all, and memorable in our history.

Other illustrations of our prosperity are the high appreciation of our labors by those who are ever ready to aid and sustain institutions devoted to the general welfare and happiness of the people. We have had cheering evidences of this aid, to which I alluded in my last address. It is a source of the highest gratification to announce the continued kindness of those who have already encouraged us in our career, and who have again made us the recipients of their bounty. The second donation of H. Hollis Hunnewell, Esq., of \$2,000, to promote the art of landscape gardening, is received with most grateful acknowledgments, and the objects to be encouraged those that are nearest to our wishes and wants.

The recent liberal donation of ninety-seven shares of the Connecticut and Passumpsic Rivers Railroad, from Dr. William J. Walker, of Newport, Rhode Island, is renewed evidence that we are not idle in our labors, in the promotion of Horticultural science. This liberal sum is given us to awaken renewed efforts at improvement in all the various branches of gardening, and more particularly the introduction of superior culinary vegetables. Our deepest thanks are due to one who, already known as a public benefactor, by the bestowal of his wealth upon kindred associations, has not forgotten our own. We wish to record our public acknowledgment of this noble act.

A donation from Wm. Thomas, Esq., has been received for the general objects of the Society, and his kind aid and sympathy has our highest consideration.

While we are participants of the overflowing wealth of those on whom fortune has smiled, we doubly welcome these acts as renewed evidences of a refined and cultivated taste, and a just appreciation of art devoted to

the improvement of our homes and the sanitary comforts of the people. Let it be our duty as well as our aim to develop still further this latent and increasing love of rural art.

Little remains for me to add. The liberal premiums offered by the Society have created a laudable competition and desire to excel, and the more we can give in this direction the more shall we stimulate to greater exertion. As speedily as we can augment the appropriations for prizes, with a due regard to other expenditures, let it be done. As the Society progresses in material wealth, so should our encouragement of every species of culture be enlarged, that the standard of excellence may be more and more elevated.

During the past year, several of our members have been called from their earthly labors, and we shall no more enjoy their companionship and aid. Of these none have been more lamented than the late Dennis Murray, whose humble life has not been without its reward. Without the advantages of early culture, by diligent study and industry, he attained a proficiency in botanical science rarely equalled by one in his position. Struck down while contributing to the interest of our last Annual Exhibition, by his usual display of indigenous plants and flowers, we shall long miss the place he so honorably filled.

One word in reference to the coming Annual Exhibition and I shall not detain you longer. Whatever course you may think desirable in regard to the dedication or opening of the New Hall remains for you to decide. But I wish to impress upon every member, who feels any pride in the possession of our new home,—who takes any interest in these exhibitions, or places any estimate upon them as indicating our horticultural progress,—the duty of making early and continued preparations for a grand display. Let our cultivators of flowers and plants begin at once, and labor diligently, to bring out their rarest and choicest specimens, reared by the aid of all their skill, and make the exhibition worthy of the ample Halls, and beautiful architecture of the building.

Let our fruit growers renew their zeal, and bring forward the largest and best specimens that their art can produce—such as no previous display has ever equalled: and let our market gardeners and amsteur cultivators present such an array of superior vegetables of all kinds, as will maintain the reputation for excellence they have so well earned. Lastly, let our Committee of Arrangements decide to begin in season with their work, and spare no exertions to develop all the taste at their command, in order that all these varied products of the greenhouse, the orchard and the garden, may be arranged to form an effective, harmonious and magnificent display, equalling any similar exhibition abroad.

GENTLEMEN OF THE SOCIETY: Wishing you each and all, individually and collectively, a happy New Year, and continued health and prosperity, I have only to say I shall be ready to cooperate with you in whatever will promote the welfare and renown of our association.

On motion of L. Wetherell the thanks of the Society were voted to the President for his interesting Address, and a copy requested for publication

Mr. Parkman, from the Library Committee, made the Annual Report for 1864.

The Finance Committee presented their Annual Report, an abstract of which we present.

RECEIPTS.					
By cash in the Treasury, December 31, 1	863,	•	-	\$1,193	53
" dividends from stocks, -	-	-	-	1,184	10
" assessments and admissions, -	-	-	-	1,974	20
" interest from H. D. Parker, -	-	•	-	3,600	00
" receipts from Mount Auburn,	-	•	-	6,897	44
" rents collected,	-	-	-	2,669	17
" receipts of Annual Exhibition,	-	-	-	968	00
" cash donations for special prizes,	-	-	-	175	00
" miscellaneous receipts, -	-	•	-	303	57
" sales of stocks and receipts of loans,		-	-	52,253	06
" received of H. D. Paker, on note,	-	-	•	38,000	00
_				\$ 99,217	97
Payments.					
To cash paid Premiums and Gratuities,	-	-	-	\$ 2,042	
" salaries,	-	-	-	875	
" rents paid,	•	-	-	1,550	
" expenses, Annual Exhibition,	-	•	•	1,618	
" library books,	-	-	-	410	
" taxes and insurance,	•	•	•	1,733	
" printing and advertising, and L. Farnl	am,	•	-	216	
" expense laying corner stone, -	-	•	-	489	
" interest on mortgage,	-	•	•	5,500	
" engravings, Testaments, &c., -	-	• .	-	552	-
" temporary loans,	-	•	-	25,978	
" for preferring 97 shares stock,	-	-	-	4,920	
" for construction of new building,	-	•	•	53,100	
" cash on hand, December 31, 1864,	•	-	•	, 229	54
				\$ 99,21 7	
The property of the Society is valued at	• 1	-	- 8	2 14,736	
And the Society owes for real estate,	-	-	•	100,000	00
Leaving a balance of	-	-	-	\$114,73 6	88
The Report was accepted, and ordered Report.	to be p	ublished	l in	the Ann	ual

The following gentlemen were elected a Committee of Arrangements for the next Annual Exhibition:—

P. B. Hovey, Chairman; J. S. Cabot, J. F. C. Hyde, E. A. Story, D. T. Curtis, C. H. B. Breck, Parker Barnes, R. McCleary Copeland, E. A. Brackett, S. H. Gibbens, Abner Pierce, E. W. Buswell, and L. Wetherell.

The appropriation of \$3,000 for premiums for 1865 was unanimously adopted, and \$400 voted for the Committee of Arrangements.

Elijah Williams, Esq., presented the Society with \$20, as a premium for strawberries, and the President presented the Society with a 2d premium of \$10 for the same object. The thanks of the Society were voted for these donations.

The Committee on Establishing Premiums for 1865 made a report, which was placed in the hands of the Executive Committee for approval.

Adjourned one month, to February 4th.

Obituary.

DEATH OF DR. EZEKIEL HOLMES. We record, with deep regret, the death of Dr. Holmes, which took place suddenly, at Winthrop, Me., at the age of 64.

Dr. Holmes was well known as the Editor of the Maine Farmer, one of our oldest agricultural papers, and which has been under his charge ever since its establishment in 1833. A contemporary Journal, in noticing his death, speaks as follows:-Dr. Holmes was born in Kingston, Masa., in 1801, was graduated at Brown University in 1821, received the degree of M. D. from Bowdoin College in 1824. In 1833 he removed to Winthrop, and practised medicine, and in January commenced the publication of the Maine Farmer. This began at Hallowell, under his editorial supervision, but subsequently removed to Winthrop, where it remained till 1844, when it was transferred to Augusta. Besides his editorial labors he was called to fill numerous public offices in his adopted state; he was Professor of Natural Sciences in Waterville College, was engaged in the survey of the Public Lands in Maine and Massachusetts in 1835, was member of both Houses of the Legislature, Secretary of the Maine Agricultural Society, and in 1861, '62, was engaged with Professor Charles Hitchcock of Massachusetts, in a Scientific Survey of the State, and was Vice-President of the New England Agricultural Society. The sudden demise of a citizen of such a record, amid his useful labors, makes a void that it will not be easy to fill. We first met Dr. Holmes at the State Fair in Augusta, found him gentle and genial, generous and candid, courteous and gentlemanly. Not only has Maine suffered a loss, but the public generally, as it regards the industrial pursuits, for his life was devoted to the advancement of these in general, and specially to the promotion of improvements in agriculture. The Legislature justly took honorable notice of the loss of the deceased. The editorial corps of the agricultural press have lost in Dr. Holmes an urbane and faithful co-worker. (Boston Cultivator.)

Our acquaintance with Dr. Holmes has continued for many years, though we had the pleasure of meeting him but once or twice. We can bear ample testimony to the value of his agricultural labors, as well as his public and private worth. An entire file of the Maine Farmer for thirty years is the best estimate of his services rendered to the cause of agriculture and rural industry.

Forticultural Operations

FOR MARCH.

FRUIT DEPARTMENT.

THE month of February has been much more pleasant than January, and without any extremes of cold; and for forcing operations has been favorable. The snow has continued to cover the ground, and, as there is but little frost, the appearances indicate an early spring.

GRAPE VINES, in the earliest houses, will now be coloring their fruit, and some of it nearly or quite ready for cutting the latter part of the month. Keep the house much dryer now, discontinuing all syringing and excess of water. Air freely, and stop the laterals, if they crowd the vines. Grapes in the greenhouse and ordinary grapery will now be breaking, and syringing should be freely given until the buds are well advanced. Increase the heat as the season advances, and give air more liberally as the growth extends. Damp down the house morning, noon and night, in fine, sunny weather. Cold houses will require no other attention than free airing, to prevent the early starting of the vines. Hardy vines may be pruned this month, where they have not been laid down.

PEACH AND OTHER FRUIT TREES, in pots, brought into the greenhouse last month, and now showing bloom, should have a situation where they can have an abundance of air and more room. Fresh trees may be brought in, if there is room, or they may be brought forward in the grapery.

ORCHARD HOUSES should be well ventilated in warm weather, to prevent the trees from starting too early.

STRAWBERRIES, for forcing, should have a good place on a warm shelf, near the glass.

Scions or Fauit Taxes may be cut this month, and preserved in earth, in a cool cellar.

GRAFTING may be commenced the last of the month.

PRUNING may be begun now, and continued through the spring months.

CUCUMBERS should be hilled out in well-prepared hotbeds, where the temperature is strong, but not too violent. Protect well with mats, in cold nights.

PLOWER DEPARTMENT.

March is the busy month. The preparation for a summer stock will occupy most of the time this month. Continue to propagate freely before warmer weather, and less time to attend to it. Harden bedding stuff off in frames.

CAMBLLIAS will now be making their growth, and will require more frequent syringing, and more water at the roots, as well as a slightly higher temperature; a slight shade on sunny days will also be of service to them. Young plants, which require it, may now be potted.

AZALEAS will now be in full flower, unless wintered in a cold house. Water more liberally, and keep rather cool, that they may continue longer in bloom. Repot and keep in a warmer house such plants as it is desirable to increase in size, and make into handsome specimens.

PELARGONIUMS will continue to need attention; go over the finer specimens, and give the branches another tie, drawing them gently down, so as to spread them out and give room for the centre shoots. Turn the plants round often; water carefully, but thoroughly; give air at all times, and great quantities, in fine weather.

GLOXINIAS AND ACHIMENES should have attention, as they continue to enlarge in growth.

HEATHS, done blooming, should be kept in a cool airy part of the house.

FERNS should be repotted, and those well established have more liberal supplies of moisture.

Tuberoses should be potted, and forwarded in a hotbed or warm part of the greenhouse.

Dahlias may be potted, and brought forward for early flower.

EBYTHRINAS should be potted for early bloom in the open ground.

CANNAS may be potted, and brought forward.

Annuals, sown last month, should now be potted off, or transplanted into boxes, and removed to a cold frame. Sow seeds for a succession.

Daisies may be uncovered and brought into early bloom, with the aid of sashes and slight covering on cold nights.

CUTTINGS, of all kinds, put in last month, should be potted off, encouraged in their growth, and removed to cold frames, when the weather will admit.

OXALISES, done flowering, may be placed away on a shelf, where they will gradually dry off.

FUCHSIAS, intended for large specimens, should have another shift, and be encouraged, by stopping the shoots, to make stocky plants.

CHINESE PRIMROSES, done flowering, should be more sparingly watered, and kept in a cool house.

VEGETABLE DEPARTMENT.

The preparation of hotbeds for early vegetables, began last month, should be continued. But where none have been made they should be commenced now. Prepare the manure, as we have already advised, and when the rank heat has subsided sow all kinds of seeds.

CUCUMBERS, for early planting, in the open ground, may be sown in small pots, 3 or 4 seeds in each.

Tomators may be planted in drills, or in pots or boxes.

LETTUCE AND RADISHES may be planted.

Egg PLANTS may be planted.

CAULIFLOWERS, BROCCOLI AND CABBAGES MAY be sown.

REMOVAL.

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That they have removed from Kilby Street to

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Correspondents will please address

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MAGAZINE OF HORTICULTURE,

FOR 1865.

A MONTHLY JOURNAL

Horticultural Science, Landscape Gardening, and Rural Art.

A NEW VOLUME

COMMENCES ON THE FIRST OF JANUARY, 1865.

THE FIRST VOLUME OF THE FIFTH SERIES.

AND THIRTY-FIRST ANNUAL VOLUME.

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It will embrace, among other kindred subjects, the following:-The Progress of Horticulture, The Science of Cultivation, Descriptions of all New Fruits, Descriptions of all New Flowers,

Descriptions of all New Trees and Shrubs, Pomological Gossip,

Landscape Gardening,

And to facilitate the labors of cultivators, a

The Kitchen Garden, Reviews of Horticultural Works, Suburban Visits, Foreign Notices. Monthly Gossip, Replies to Questions, Reports of Horticultural Societies.

Monthly Calendar of Horticultural Operations

will be given in detail, and adapted to the wants of amateur cultivators, reminding them

of the routine of operations which are necessary to be performed in the Fruit Garden, Flower Garden, Ornamental Grounds, Greenhouses, Grapery, and Kitchen Garden, through the varying seasons of the year. In fine, giving all the information which the amateur or the country gentleman requires to manage successfully the smallest or largest garden. In the thirty volumes now completed, more than Nine Hundred Drawings of the Newest and Finest Fruits have appeared, many of them in no other work, and upwards of Eighteen Hundred other Engravings, illustrating the great variety of subjects treated upon. No pains will be spared to render the Magazine what it has heretofore been the most valuable Horticultural periodical extant.

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PRINCE DE LIGNE.

No. CCCLXIV.

APRIL, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMBRICA.

BONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, MEM BEDFORD, WORDSPIER, ROCHESTER, BUFFALO, GLEVELAND, WILMINGTON. STC. ETC.

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3d and 4th Cover pages, \$30 per page.

Each page contains 85 lines of space. No discount allowed from these

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DREW'S NEW DWARF,

Growing only one foot high, branching and forming an erect dense bush. The pea is of the largest size, of a blueish tinge, slightly shrivelled, and as sweet and delicious as the Champion of England, without the tough skin of that variety. Medium early. It is the productive, and a new, valuable, and superior pea. A single row, planted one foot pair, will all the new a soot wide and one foot high. A small quantity of this new variety is chared for sale at \$1 per quart.

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HAVE THE PLEASURE OF OFFERING TO CULTIVATORS THIS

VALUABLE NEW HARDY GRAPE,

Raised by Mr. J. G. Morneberg of Saxonville, Mass., who exhibited splendid specimens before the Massachusetts Horticultural Society, which attracted much attention, and elicited the following notice by Hon. J. S. Cabot, Chairman of the Committee on Fruits, in his annual report for 1863:—

Specimens of the Framingham Seedling, a new grape, raised by J. G. Morneberg of Saxonville; has a round berry, of good size, black color, with a fine bloom; said to be

a very strong grower, not subject to mildew, or to drop its fruit, and to be early.

The Framingham is a superior grape, as early as the Hartford Prolific, which was shown at the same time, and with bunches as large and handsome as the Isabella, which it resembles in appearance and quality, having the same brisk vinous flavor. The vine is a remarkably strong and vigorous grower, with large, thick foliage, resisting the attacks of mildew; and for earliness, productiveness, and hardiness may be safely pronounced a valuable addition to our native grapes.

3 year old vines, very strong, \$2 each, \$18 per dozen. 2 year old vines, very strong, \$14 each, \$12 per dozen.

Vines safely packed and forwarded to all parts of the country.

IONA AND ISRAELLA GRAPES.

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53 North Market Street, Boston,

Offer for sale these two new varieties, which have been pronounced, by all who have tested them, superior grapes, and worthy of general introduction. They are described as follows :-

IDMA. Bunch and berries large, of a delicate pink or wine color, and possessing a rich, brisk, and vinous flavor: vines healthy and hardy, ripening just after the Delaware, and very productive. Plants \$2 each; \$18 per dozen.

ISRAELLA. Bunch six inches long, with a shoulder; berries large, black: every way a most excellent grape, ripening as early as the Hartford Prolific, and far surpassing it in quality. Plants 32 each; \$18 per dozen.

ALSO,

Crevelling, Hartford Prolific, Rogers' Nos. 4 and 15, Winchester, Union Village, Diana, Rebecca, and other grapes.

NEW STRAWBERRY.

THE AGRICULTURIST.

HOVEY & CO.

Are now prepared to receive orders for this new variety, which is stated to be one of the largest of strawberries. The plants will be ready for delivery in March, and will be well established in pots, at 75 cents each, or \$8 per dozen. Plants from the open ground, in April, as follows:-2 plants, \$1.20; 6 plants, \$3; 12 plants, \$5.

AMERICAN POMOLOGICAL SOCIETY.

THE proceedings of the last session (the 10th) of the American Pomological Society, held in Rochester in September, 1864, have been published, and form a volume of nearly two hundred pages, including the Catalogue of Fruit, revised and brought up to the year 1865. The meeting at Rochester was well attended by members from the Middle and Western States, but the attendance from New England was smaller than usual. The exhibition of fruits was very good, considering the season, and the variety of grapes not only much larger, but better than in previous years, showing conclusively the interest taken in grape culture. Of new fruits, the number was small.

The volume has, we presume, been brought out under the superintendence of Mr. Vick, the industrious Secretary, who seems to have done the work thoroughly, and with great credit to his taste and intelligence. The report of the discussions is, in the main, correct, considering the hurried manner in which many of the remarks were made from the want of The State and local reports, which were few in more time. number compared with some previous years, have been, as they were in the last volume, omitted, the substance of them having been incorporated into the Fruit Catalogue, which has been completely revised by the chairman, P. Barry, Esq. This has been a laborious work, requiring great attention, but it has been cheerfully undertaken and thoroughly done. now exhibits, in a tabular and condensed form, the aggregate of the entire results of the Society's discussions, as well as the substance of all the reports which have been made to the Society since its organization. Those who wish to know the details can consult our previous volumes, or the Society's reports, but the revised Catalogue gives the results.

Owing to the long and continued illness of the President, Col. Wilder, he was unable to be present, and a letter from him was read to the Society. His expected annual address was therefore lost, much to the regret of all. In consequence of his absence, his place was filled by Vice President Dr. John A. Warder, of Ohio, who discharged the duties of the office in his usual urbane and courteous manner, to the entire satisfaction of the members. On taking the chair, he congratulated the members present on the favorable auspices under which they were assembled in the goodly city of Rochester, for the promotion of the noble objects for which the association was organized.

Committees were then appointed for facilitating the proceedings of the meeting, and, among others, a committee who reported the order of business, and suggested topics for discussion. The order of business, after reports of various committees, was the "discussion of the lists of apples, pears, peaches, plums, cherries, grapes, and small fruits," with remarks on the adaptation of soils to peculiar varieties of fruit. It is to these discussions that we shall confine our remarks, leaving the various subjects of cultivation, &c., to another opportunity to bring before our readers. Our resumé must necessarily be brief.

APPLES.

BEN DAVIS. Mr. Nelson, of Indiana, would like to hear about this promising apple. He regarded it as the most desirable for Indiana. Mr. Bateham, of Ohio, did not think so highly of it. Dr. Warder said it was cultivated as the New York pippin. Mr. Barry had never fruited it; he thought it promising. Mr. Nelson thought it more productive than any variety he cultivated, as did Mr. Edwards of Missouri. Keeps till February; keeps in Indiana till May. Its flesh resembles Smith's Cider; rarely has an imperfect apple. Its name was recognized by the Society as Ben Davis.

BACHELOR'S BLUSH. Considered by Mr. Parry, of N. Jersey, a valuable apple, similar to Maiden's Blush, though distinct. J. J. Thomas thought it might be identical. Referred to the committee on native fruits.

PRINCELY. Described by Mr. Parry as of first quality. Medium to large; tender and pleasant; subacid; ripe from September to Jan.; from Bucks Co., Pa. Mr. Noble of Pa. thought it excellent, but it has not been recommended in

either of the reports from Pa. or N. Jersey. Mr. Parry said it was because it was not known.

CHENEY. Presented by P. B. Mead, who said it was from the Cheney farm in Mass. Sept. and Oct. Referred to the committee on fruits.

LIPPINCOTT SWEET. Considered by Mr. Parry to be one of the best sweet apples, good size, very productive, and keeps well till spring.

COGSWELL AND OHIO NONPAREIL. These two were exhibited by Mr. Batcham to show they were distinct. Mr. C. Downing said they were entirely distinct—no similarity in the growth of the trees.

GRIMES GOLDEN PIPPIN. Extensively cultivated in Eastern Ohio. Mr. Marshall said it originated in Virginia. Season, Jan. to April. Mr. C. Downing thought it promising.

KING OF TOMPKINS Co. Mr. Nelson said it did finely in Indiana. Produces every other year; drops badly, but otherwise excellent. Highly esteemed by D. Harkens of Pa. and Wm. Bort of Michigan. Langworthy of N. York, said it was productive and of fine size; some thought it the best apple in the country: bears regularly with him. Bateham of Ohio said it was not sufficiently productive, and drops badly. Carpenter of N. Y. and Parry of N. J. did not get a satisfactory crop. Mr. Ellwanger said it dropped more on young trees than on old ones. J. J. Thomas said the King only yielded about two thirds as much fruit as the Baldwin. Mr. Wier of Illinois said it was a splendid grower, hardy, fruit large, and of the finest flavor, bearing young. Dr. Sylvester said it was a uniform bearer, and if it did not yield as much as the Baldwin, this is made up by the extra price.

SOUTHERN APPLES. Judge Hoadly, of Ohio, wished to know about Southern apples. C. Downing said Magnum Bonum was a fine winter apple. Dr. Warder stated that many of them were old friends with a new name. The Pennock came back as the Red Ox.

MILAM. Thought by Judge Hoadly to be the best baking apple. Dr. Edwards, of Missouri, agreed with Judge H. Warder and Bateham did not regard it so much.

FALLENWALDER, or Fallawater. Mr. Noble of Pa. regard-

ed it as a good apple. J. J. Thomas said it diminished in size and quality as far north as Western N. Y. Dr. Beadle of Canada said it was of fair size, but of inferior flavor. Mr. Paul of Mass. said it was second rate. Dr. Warder said it was one of the best frying apples. Mr. Beeler of Indiana said the tree bore thirteen or fourteen years, and then dies. Mr. Bateham of Ohio said it was brought into Columbus very handsome, by a man who ripened it in the dark, and also obtained a high price. Mr. Bort of Mich. stated it to be hardy in the West.

RIDGE PIPPIN. Described by Mr. Parry as a good, late winter apple, keeping till June; turns as yellow as an orange in May: a good grower and good bearer. From Bucks Co., Pa.

WAGENER. Mr. Nelson of Indiana said it was an excellent as well as a profitable apple in the West. Mr. Bort said it was good in Michigan; Mr. Paul, in Massachusetts, and Mr. Price, valuable in Pennsylvania. Judge Hoadly of Ohio said it bears early and well, but rather leathery; and Muir of Missouri said it did well and bore early; but was a second-rate fruit, though handsome and highly esteemed.

BRENNEMAN AND KLAPBOTH. C. Downing said the Klaproth was a very fine fruit, and Mr. Hooper of Pa. thought these two of the finest fruits, and bring the highest price in the Philadelphia market.

CORNELL'S FANCY. Mr. Noble of Pa. said it was an excellent apple, not much known.

JEFFRIES. Mr. Hooker of Rochester said this was handsome, pleasant, and ripe in September. Hooper of Pa. said it specked badly, and falls prematurely. Mr. Hoag of N. Y. had fruited it, and thought it a very fine apple indeed.

EVENING PARTY. Pronounced, by Mr. Noble of Indiana, a very handsome, fine apple, but too small for market. C. Downing knew but little of it, and that little was favorable.

NORTHERN SPY. Quite a discussion took place in regard to this variety. Nelson said it improved with age; had a fine crop last year, but would not recommend it for extensive planting. Mr. Marshall of Ohio concurred. Muir of Missouri said it was unprofitable in his State. Carpenter of N. Y. said it had been largely planted at the East, but is not regarded

with favor. Trees, fifteen years old, have produced nothing. Paul of Mass. said it was a healthy tree, a good grower, and when once in bearing produces well. Bort of Mich. said that, since the trees began to bear, it had given very general satisfaction. Dr. Sylvester of N. Y. said it bore late, but uniformly a good bearer in alternate years. It is one of the best of apples, and keeps till May. It is necessary to thin the branches, and, when bearing heavily, to thin the fruit, or it will be inferior.

COOPER'S REDLIN, which Barry said was the same as Cooper's Red Market. Parry said it was esteemed highly in New Jersey, and keeps till May and June. Bort of Mich. recommended it, and thought it would prove valuable. Hooker of N. Y. said it was highly esteemed by the market growers; colors finely, and is thought saleable in April and May; of fair quality, and he thought a profitable apple for cultivation.

Monmouth Pippin. Carpenter of N. Y. said it was a fine apple, and likely to be popular; will probably be substituted for the Newtown Pippin. Parry of N. J. said it did well, as did also Parsons of L. I., Hoopes of Pa., and Ellwanger of N. Y. Mr. Nelson of Ind. did not regard it so highly. Dr. Warder thought it could never drive Peck's Pleasant out of the market. Harkens of Pa. said its productiveness and fairness may cause it to be substituted for the Newtown Pippin, but in quality it is not to be compared with it.

RIBSTON PIPPIN. R. Buist of Pa. had known it fifty years. Does not do well in warm climates; ripens prematurely; thought it valuable at the North. Dr. Beadle of C. W. said it was a fine apple there. A gentleman shipped it to Scotland last fall, with the Newtown Pippin, and obtained the same price for it, \$15 per bbl. Nelson of Ind. said it was a beautiful apple, but would not do to recommend for his State. Thomas recommended it as sometimes fine. Dr. Warder said in Southern Ohio they rarely get it in good condition.

GRAPES.

We regret that our space does not allow us to copy the discussion on grapes entire; but as it occupies upwards of twenty pages it will be seen that it would fill more than half of the Magazine. We shall endeavor to give the substance of the Report. All the varieties were discussed with the specimens before the members.

ADIRONDAC. Dr. Beadle asked if it was hardy, as his young vines had been killed. Mr. Thurlow of Mass. left his young vines uncovered in the winter of 1863-64, with the thermometer as low as 15° below 0, yet it bore well last year. Moody said it was about as hardy as the Isabella. Herendeen of N. Y. said that because a year-old vine was winter killed. was no test of its hardiness. Campbell of Ohio had lost some of his vines, and thought it rather tender. Thermometer 150 below zero, and all grapes injured. Knox of Pa. said his vines went through the winter well with the mercury at 7º below 0. Hovey of Mass. found a one-year planted vine quite hardy without protection; gave an account of his visit to Mr. Bayley's grounds, where he saw the Adirondac in all stages of growth, and found it a little more forward than the Hartford Prolific: thought it quite as hardy as Isabella or Diana. Mr. Bailey of N. Y. said he covered all his vines, and did not claim that the Adirondac was any hardier than the Isabella, while it was as free from mildew as any grape he had. Vines stand the sun well, and the fruit hangs well on the bunch: with him, it was a few days earlier than the Hartford Prolific. The vine retains its foliage until the grapes are thoroughly ripe.

CREVELLING. A cluster of this grape exhibited was black and fully ripe, but quite loose in the bunch. Knox said he had seen much better bunches. Not quite so early as Hartford Prolific: flavor fine. Hooker of N. Y. called the specimen a good one; it was early, productive, hardy, and valuable for home cultivation; but such bunches would not sell in the market: berries hang well. The form of the bunch is of the greatest consequence; the looseness of the Crevelling is entirely a characteristic one, and he did not believe age would improve it. Mead considered it a good early grape, superior to Hartford Prolific, and he was surprised that any one should say it will not sell when the Hartford Prolific will: thought they were not good samples. He wished to give his testimony to the effect that the Crevelling was every way qualified to supersede the Hartford Prolific. Harkins of Pa. thought it

would be a popular grape; and though its bunches were not compact, it would bear as great a weight of fruit as the Hart-Hoopes said his experience with it was limited; but he never saw such loose bunches exhibited before: had seen it as compact as the Isabella. Its berries did not drop. liked it. Bergen and Sylvester concurred with Mr. Hooker. Muir said that in Missouri its leaves burn badly. Edwards of Mo. said it grew rapidly and did not drop its leaves more than other sorts. Carpenter of N. Y. said he had none, among thirty varieties, that was more promising; grew rapidly, but was not quite as early as he anticipated. Downing said that as the vines get age, the fruit ripens earlier. Woodward of N. Y. had fruited it three years; had seen as fine bunches on it as he ever saw on any grape—full as fine as Iona. Mr. Hovey concurred with Hooker. The time had gone by when we should value a grape simply from its earliness: the loose bunch was a defect which must be considered in the estimate of a new grape. The looseness of the bunch was also confessed by Messrs. Hoag, Seelye, and Campbell.

UNION VILLAGE AND ONTARIO. Pronounced identical, and the Society voted to drop the name of Ontario. Mr. Knox regarded it as one of the most profitable market grapes; sold at 50 cts. per lb.: he could protect an acre of grapes for \$5. Mr. Mead preferred the Union Village to the Concord. Field thought it as bad as the Isabella. Nelson regarded it as a valuable grape, though not as valuable as the Concord; a man could raise 1000 lbs. of the Concord easier than he could raise 100 of Union Village. Edwards of Mo. considered it far better than the Isabella, which he had given up, but should cultivate the Union Village as a market grape. Bergen had not been successful with it. Carpenter said it had given him great satisfaction. Hovey thought it too good a grape to reject, was earlier than the Isabella, and would be ranked as one of our excellent American grapes. Moody of N. Y. thought that when its merits were known, it would be dropped as a market grape. Downing said the berries dropped from the bunch. Saunders of Washington thought we could get much better grapes before we can get the Union Village.

REBECCA. Hovey of Mass. believed this to be one of our finest grapes, and he was glad to know it was improving in habit and growth, as it was winning its way to favor in the East. Was a better grower than the Delaware, and should be put at the head of American grapes. Brooksbank of N. Y. had propagated it ten years. As good a grower as the Delaware, ripening a week later, and had never mildewed with him: as hardy as Isabella: he protected his vines, as he did all but the Clinton. Bergen did not protect his vines, and he found the Rebecca slightly injured two years ago. fruit is good. Paul had ripened it in Mass.: quality the finest, and keeps all winter. Brooksbank said it was not a a shy bearer, but quite productive. Carpenter said it was perfectly hardy with him, but not so strong a grower as the Delaware. Field said it was better for stiff soils than for sand. Hooker said it was improving, but not a strong grower. Knox called it a good grower; and thought the feeble growth of some vines was owing to forced propagation; later planted grew much better. Mead placed it high as an American grape. Carpenter said it was growing popular in N. Y. City as a table grape.

MAXATAWNY. Noble of Indiana said it grew better in city gardens than in country vineyards. Hoopes considered it the best white grape: later than Rebecca, but more valuable with us; perhaps too late for the North. Campbell said the bunches were loose, but that it was a stronger grower than Rebecca. Parry thought it the most valuable white grape in N. Jersey. Mead could not ripen it: a very good grape, but ten days later than Rebecca, and no use to attempt to grow it northwest and east of New York. Saunders said that in Washington it was an early grape, ripening with the Delaware: a strong grower, and he thought it would ripen anywhere with the Isabella. Downing said it did not ripen with him.

IONA. Dr. Grant said this was the ninth year of its bearing; that it was supposed to be a seedling of the Diana. It bore fruit in 1857, and ripened its fruit Sept. 1. Had never been touched with rot or mildew; did not protect his vines—perfectly hardy: hardier in the leaf than any grape he knew: extremely productive: has been grown from Delaware to

Vermont: ripens evenly, and at the same time as the Delaware. Keeps any desirable length of time, until it dries into raisins. Had never made wine from it. Downing had fruited it three years. If it did as well the next three years, he would consider it one of the best grapes we have in all respects. Mead had fruited it in greater perfection than Dr. Grant. Wood ripens thoroughly; holds its leaves well; free from disease; good healthy vine, and good grape.

ISRAELLA. Dr. Grant stated that the Israella ripens from the surface towards the centre. [Qu. How do grapes generally ripen?] It ripens earlier than any grape he has ever cultivated, and keeps as well as any, with two or three exceptions. It keeps easily till the first of March. The Isabella is probably its parent. The wood is hardy—never had any protection; is much earlier,—full two weeks,—than the Delaware. It is ripe and good to eat before the Hartford Prolific has turned. It is the best early grape. The bunch is six inches long and shouldered on one side.

DIANA. Knox had great regard for it; is among the best grapes: vine a little tender; protect it and the tendency is to over-bear; hence he is compelled to prune severely. He would put it into a selection of five. A good table grape—a good wine grape, and a good keeper. Field said it bore sparsely with him; did not fill the bunches well. Dr. Edwards asked Mr. Knox if he summer pruned severely. Bort said it did well in Western Michigan—ripens well—was ripe two weeks ago, (Sept. 3). Dr. Grant said that for nearly twenty years he had not failed to get a good crop. It becomes good to eat early, but it is not perfectly ripe till late in the season. Second only to the Delaware for wine.

DIANA HAMBURG. From Mr. Moore of Brighton, who raised it from a Diana, fertilized with Black Hamburg. The grape, when ripe, is dark crimson; the sample not quite ripe. Fruited out doors; believed to be perfectly hardy. Mr. Mead considered it a promising grape, and unmistakably a hybrid.

ROGERS'S HYBRIDS. Mr. Campbell thought them hybrids; regarded No. 3 as the best of them, and No. 4 the next best. Thomas thought No. 9 earlier, larger, and handsomer than the Diana, though probably inferior in flavor. Campbell did

not think No. 9 so good as No. 3. Mr. Bergen had fruited seventeen of these grapes; had only found one, so far, that he called good, No. 5. No. 44 was the earliest: 43, 41, 33 and 13 he marked as promising-5 best flavored. Mr. Campbell said his vines were unprotected; No. 3 was the hardiest, 4 the next; the others tolerably hardy: thermometer 15 to 16° below zero. No. 15 suited many, but he did not like it so well as No. 4, which was the most prolific of all, and a better grape than the Concord. Bergen said visitors to his place pronounced several of them to be superior to Concord or Hartford Prolific. Mr. Barry said he had seen no evidence that these grapes were hybrids. Mr. Hoag said No. 1 mildewed. Not one of these ripened last year, (1863); No. 4 surpasses all others in cluster: there is not anything very valuable about any of them. It was voted that the Fruit Committee report at the next meeting such of these grapes as really have merit, with names to be adopted with the consent of Mr. Rogers.

To Kalon. Knox could not recommend it for general culture. Merceron of Pa. said it rotted badly. Harkens could say nothing in its favor. Dr. Grant said that with its disposition to rot it should be rejected. Hoopes had got only one perfect crop in ten years.

LYDIA. Campbell said it was a good growing vine; berry large, bunches medium, quality like the Rebecca, fine flavor, and ripens at the same time; bears better, and is a stronger grower—being larger than Rebecca, color green amber in the sun. Mr. Mead had fruited it; vine a good grower, and fruit good—not first rate.

ALLEN'S HYBRID. Mead considered it a good grape. It is tender, sweet, and has a flavor that reminded him of some foreign grape. Not to be recommended for general vineyard culture: mildews where exposed. Would place it pretty high on the amateur's list. Hovey said it had been before the Mass. Hort. Society for ten years: a true hybrid: does not mildew any more than the Hartford Prolific: is a superb grape, and will do well wherever the Delaware and Rebecca will succeed. Had more than met the expectations of cultivators. B. B. Prosser of N. Y. had fruited it; exposed last

winter (1863) and uninjured: the leaf as hardy as Rebecca, and a better grape. Downing said it was the earliest grape he had, and kept well. Dr. Grant said it was as vigorous as the Isabella—remarkably free from mildew. Grows better and better: fine amber colored, and much better than Rebecca. Hoag said it was as vigorous as Isabella. Mead did not hesitate to recommend it, where it can be sheltered.

MILES. Mr. Downing thought it a good grower, early, hardy, very productive, and fine flavor. Bergen said, of over fifty varieties, this was the earliest. Hoopes said that he introduced it eight years ago; ripens last of August; is the earliest grape, productive, and pleasant flavor.

CUYAHOGA. Campbell said it was too late, requiring a season full as long as the Catawba; hardier than he expected. Colman's White was the same. Mead said it was too late. Harkens had not found it satisfactory; did not ripen—only a fox grape.

IVE'S MADEIRA. Dr. Warder called it a hardy, productive grape, and makes a delightful wine: growing in favor as a wine grape.

ISABELLA. On motion of Mr. Field, this was transferred from the list for general cultivation to that for special cultivation, on account of the disappointment received by many to ripen it, only in favored localities.

HARTFORD PROLIFIC. Knox of Pa. said it was the best early grape he had thoroughly tried. Ripens the last of August; free from disease; productive—12 vines bore 626 lbs.: a good grape when perfectly ripe. The fruit does not drop. Harkens said it fell from the bunch wherever he had seen it. Field succeeded with it, and his friends liked it as an eating grape. Knox remarked that, although he esteemed it, he would not recommend planting it very largely. All in all, no grape was so valuable for table and market as this.

CONCORD. Mr. Knox said nine tenths of his visitors preferred this to the Delaware: improves as you go south: makes a good wine, though he did not consider it the best wine grape; Delaware makes a better wine. Saunders of Washington said it was excellent at Philadelphia, but better at Washington, so that visitors preferred it to any other grape

Edwards of Missouri said the Hartford Prolific and Concord sold in the St. Louis market at 40 cents a pound-higher than any other grape. The Concord sells better with us than the Delaware. The Delaware has failed to come up to our expectations as a wine grape. cord will make a very excellent wine in our region. The Clinton is also one of the best wine grapes. The Concord is certainly the grape for the million. Kelsey of Ill. said the Concord is the market grape—is preferred by the side of the Delaware. As a market grape it is ahead of all others. Mr. Willard said, in what was known as the Military Tract, in his State, the order of ripening of grapes was very capricious. This year the Delaware and Concord ripened at the same time, 1st of Sept.; Isabella a week later. Some seasons the Catawba ripened before Isabella. Field said it was a fact the million preferred the Concord and Hartford Prolific to the Delaware. A New York wine importer informed him that he had produced a perfect imitation of Sherry from the Concord juice: buys all the Concords he can get for this purpose. Bergen said last year his Concords rotted badly: had changed his opinion in regard to the Concord in his locality. Hartford Prolific did not rot beside it.

This ended the long discussion, which we have given as fully as our space would permit, leaving out collateral matter, but retaining the salient points of each speaker, so that their views should not be misunderstood. The record of these grapes over a wide section of country, by various cultivators in various soils and localities, is more complete than has before been given. We only regret that we are compelled to postpone a review of the other fruits till our next number.

EVERGREENS.

BY GEORGE JAQUES, WORCESTER, MASS.

Whether for ornamental or for useful purposes the peculiar value, here in the Northern States, of persistent as compared with deciduous foliage seems not to be sufficiently

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appreciated. A prominent characteristic of the year, in this section of the Union, is a long and rigorous winter. Throughout New England, especially, except along the extreme southern boundary, for a period of nearly five consecutive months out of the twelve, the roofs of buildings are more or less covered with snow, out-door vegetation is dormant, the music of the feathered tribes is hushed, and a solemn, dreary silence reigns over the face of nature. During nearly half the year our deciduous trees, stretching their naked arms out into the frosty air, have no more significance than a battery of quaker guns, and, for any decorative effect upon the landscape, might as well be dead as alive. Yet our citizens, even those cultivated far beyond the mere prose of rural life, continue to build their houses in imitation—sometimes in caricature—of an architecture which is appropriate only where the orange is an open-air fruit, as they still persist in planting their ornamental grounds with an undue proportion of trees which, from mid-autumn till late-spring, are annually stript of their glory.

Waiving for the present what might be urged in favor of steep roofs, snug apartments, and not over extensive verandas, as essential features of domestic architecture in a climate like ours, a few remarks on the character, uses and cultivation of some of our best hardy evergreens, may not be wholly uninteresting to those who read the Magazine of Horticulture.

The great obvious advantage of this class of trees, over those that shed their leaves in the fall, is their permanent foliage, which exhibiting so many charmingly varied hues during the season of its most rapid growth, continues throughout the year only a degree less beautiful than it appears in May and June. This should be understood as an argument for the more general, but not for the exclusive use of evergreen trees in the decoration of out-door scenery. The leafless branches of the deciduous class of trees, indeed, have always a certain ornamental value, even while winter "rules the inverted year," and, mingled with evergreens, they serve to relieve somewhat the monotony of the landscape. In addition to their persistent leaves, trees of the evergreen family are often loaded with snow, or spangled with ice.

for days together during our long winters; and then, while drooping beneath this weight, they present, in the sunshine, a gorgeous spectacle, with which the richest tropical vegetation has nothing to compare. Evergreen hedges, favorably situated, exhibit this singularly beautiful appearance sometimes for several weeks together, and thus occupy a high rank among the few out-door objects which the eye rests upon with pleasure during the colder half of the year.

Omitting to notice any of those fine evergreens which would be very desirable, had they stamina to bear our severe climate, we have left, among others, the following hardy and excellent varieties:

ABIES.—Singly or in groups, in belts or hedges, for all general uses, the Norway Spruce is entitled to head the list. Easily transplanted, patient under the shears, beautiful when let alone, exempt from disease, uninfested by insects, thisall things considered—is our most valuable evergreen. From a national habit of growing in a conical form it is seen to the best advantage standing alone on a close-shaven lawn, its lowermost limbs spread out on the grass, and its feathery foliage so thick that no part of its trunk is visible. The American Double Black Spruce is easily distinguishable from the Norway by its horizontal branches and the rich dark-green hue of its leaves. As a single tree upon the lawn it sometimes produces a fine effect, but, like other American evergreens, it is rather liable to become thin or bare near the ground,—a habit which perhaps might be prevented by a light annual shearing in a conical form, for five or six years. beginning with the season of its final transplantation. Its best place, generally, is where it forms a component part of a belt or group. The Hemlock Spruce, scarcely rivalled in beauty by any known evergreen in the world, has been treated in this country with a strange neglect, partly from its being so common in its uncultivated state, and partly from a prejudice that it is a stubborn subject to manage. But these objections are not entitled to consideration; for, in the first place, the hemlock for decorative purposes, is not so common as many others; and, secondly, under proper treatment, there is no difficulty whatever attending its cultivation.

have moved hundreds of hemlock trees without scarcely any Our practice has been to take up the young plants -six to twenty-four inches high-from an open field or the southerly side of a wood, where they are exposed to the light, and where the soil is sandy or loamy, and free from cobble Removing them at the usual time of spring transplanting, and even as late as the last of May, with as much earth as possible adhering to their roots, and always on a cloudy or rainy day in preference to fair weather, we have set them almost on the top of the ground, in nursery rows, subjecting them afterwards to the same treatment that other evergreens receive. After two or three years, if the trees were not large enough, or were not wanted for planting in some permanent locality, we have found it of great benefit to reset them in new nursery rows, with a view to prevent their roots from spreading too far for a safe transplanting at some future time. The hemlock, until well established, is of rather slow growth. Although it bears shearing well, and makes a most beautiful hedge, its most effective position is where it is grouped by itself, or along the borders of belts and groups composed of other evergreen species. In order to produce a sufficient branchiness near the ground, we have sometimes had good success by planting two or three small hemlocks crowded together in the same hole, and treating them afterward as if they formed but a single tree. The hemlock submits very kindly to this often convenient expedient.

Thuja.—The American Arbor Vitæ is a well-known tree for screens, hedges and belts. The Siberian Arbor Vitæ (T. Siberica,) a less known smaller growing species, is more dense and beautiful in its foliage, and is admirably adapted to the purpose where a small, low hedge is desirable. We have seen it very effective standing alone on a grass-plot or in a flower garden, where a miniature evergreen tree was needed to relieve a disagreeable monotony.

PICEA.—The American Balsam Fir (P. Balsamea,) is a poor tree, except possibly in the interior of groups or wide belts. The European Fir (P. pectinata), or Silver Fir, deserves a place in every large collection. Once established, it grows well; but it is expensive, difficult to transplant, and,

from its extreme tendency to lose its leading shoot, does not seem well suited for an exposed situation.

PINUS.—The best-known tree of this family is the common White Pine, which is easily transplanted, can be beautifully thickened by shearing or shortening-in, and is of great value for extensive groups and belts. The Austrian Pine (P. Austriaca,) with its long leaves and dark-green color, is also very valuable for ornamental purposes. The Red Pine (P. resinosa,) common in Maine and Vermont, is a fine tree. The Pinaster, or Cluster Pine, and the Scotch Pine are also desirable in any large collection.

There are several other evergreen trees of greater or less merit, as the White Cedar, and especially the Red Cedar, or Savin, (Juniperus virginiana,) which deserves to be planted oftener in ornamental enclosures. The extremely varied color of the leaves of the Red Cedar, and their russet and brown hues intermingled with its blue berries, present a very pretty appearance in the autumn.

Before offering any hints in regard to the treatment of evergreen hedges, it may not be out of place here to say a word or two concerning box edgings or borders. Occupying the position of hedges, and like them also in the care which they require, these evergreen borders, wherever a professional gardener is not employed, are almost always suffered to go unpruned, so that in a few years they become worthless for any ornamental purpose. Like all other evergreens, these box edgings ought always to be set in the spring, and, as in the case of hedges or any other planting in a single line, the soil must be equally deep and fertile from end to end of the border, or a very disagreeable want of uniformity in the growth of the plants will be the result. The most important after-treatment of these borders consists in shearing them every year, once in the spring and again in the latter part of The summer pruning, however, will not in all the summer. cases be necessary. It is always well to protect the box plant from wind and sunshine, during the winter. This may be easily accomplished by a covering of pine or spruce boughs, straw, or the like. Drawing the adjacent soil entirely over the borders with a hoe, so as to bury them out of sight, has

been often successfully practised. Cared for in this way, box edgings may be kept handsome fifteen or twenty years, without once re-setting. An excellent form to shear these borders into is that of a common brick lying on the ground. The perpendicular sides and flat top of this shape are easily made with a pair of common grass-shears.

For a small evergreen hedge, two to four feet high, the Siberian Arbor Vitæ is a most beautiful plant. The shrubs should be set equidistant from one another, the distance being say from 12 to 20 inches, according to the supply of plants on For a larger hedge, use the Hemlock or the American Arbor Vitæ, setting the trees one to three feet apart, according to the supply. The Norway Spruce, while young, makes a beautiful small hedge, and will grow to form a hedge, or screen, of almost any desirable height and breadth. Where a hedge of this noble tree is to be kept not above six feet high, the plants ought to be about three or four feet apart. Higher than this and with a proportionately broader base, the plants may be four to eight feet apart. In some of the tall Norway Spruce hedges which so admirably sheltered the gardens of the late Mr. Cushing of Watertown, the trees were even nine or ten feet apart. But whatever it may be, the distance between the plants should be the same from end to end of the hedge; because uniformity, not variety, is essential to the beauty of this branch of topiary art. For immediate effect, it is an excellent practice to set the plants at just half the distances given above, and then, after three or four years, every second plant may be taken out and used elsewhere.

It is very easy to see why there are so few fine hedges in the country, where no professional gardener is kept to take care of them. In most cases the soil from end to end of the line is not properly prepared and made uniformly deep and fertile. The plants are often crowded together and never afterwards thinned out. Frequently an attempt is made to produce an immediate effect by using plants of too large size, and thus a good result is never obtained. More hedges, however, are ruined by neglecting to prune them than by all other causes combined. From their first setting out all hedges ought to have at least one regular pruning—and two or

three would be better-every year, the most important and indispensable clipping being that which the plants should receive just after the growing season commences. The last pruning ought not to be delayed beyond the last of September or first of October. Most evergreen trees have a natural tendency toward a more or less conical habit of growth, which must not be disregarded in training them in hedges or elsewhere. For any hedge, deciduous as well as evergreen, the best form is that of the letter V inverted; that is, an isosceles triangle standing on its base should represent a transverse section of the hedge. As a general rule the base of this triangular form should be about half its height; but for quite tall ledges a less proportionate breadth will answer, while the reverse would be required for an extremely low or miniature hedge. Any narrowing of the bottom or widening of the top, especially if it go beyond making the sides of a hedge perpendicular, operates directly to destroy its beauty; for, under this system of trimming, the upper branches cast a shadow which checks the growth of the lower part of the hedge, if it does not cause all the lower limbs gradually to die and drop off. Thorn and other hedges all over the country may be seen ruined by this improper mode of pruning. The smaller the plants used at the outset, if above from six inches to a foot high, the finer will be the ultimate result, provided always that the regular annual trimmings are never once omitted. This necessary care of a hedge requires, however, less time and skill than many imagine. Using an ordinary grass-sickle, with a swinging motion, it requires no great ingenuity to give the desired shape to a hedge, by the eye alone. Where extreme accuracy is required, it will be necessary to cut by line and measure.

That sort of wide or irregular hedge, called a Belt, is, like the former, very useful, at the same time that it is very ornamental as a screen, and especially as a protection from wind, for cultivated grounds. Belts may be composed of a variety of trees and shrubs, the proportion of evergreens predominating where density is desirable. A group is something altogether different from a clump; the former being the most charming feature of a landscape, the latter, so much

timber or shade, and nothing more. To produce the best effect in planting the former, requires the eye of an artist, and that disciplined taste which comes from long study of what is most beautiful or picturesque in natural or artificial scenery. Indeed that successful combination into one harmonious whole of the many varied beauties of nature which give the best effect to a group, is a rare achievement even of the professional landscape gardener.

A few suggestions must close this already too long communication. The usual time of spring transplanting is the best season to move evergreen trees. Any time in May is better than the autumn. Where fall-transplanting becomes necessary, let the work be accomplished, if possible, in September, or at any rate not later than the middle of October; for, unlike deciduous plants, evergreens do not have their vital processes suspended at the approach of cold weather. exceptional cases of occasional success in moving spruces. &c.. in the fall, are easily explained. As is stated above in regard to the hemlock, it is always best to move all evergreens with as much earth as possible adhering to their roots, and on a cloudy or even a rainy day rather than in the sunshine. leading shoot of an evergreen may be cut out when it is desirable to stimulate a thicker growth near the ground; for a new leading shoot, notwithstanding what the books say, may be easily formed by tying up vertically one of the little side branches at the base of the former leader. Evergreen trees ought never to be "trimmed up" from the ground, so as to expose a naked trunk, unless where their beauty is designedly sacrificed in order to promote their growth as timber. Still, trees of this class which have lost their lower limbs may often be too valuable ornaments to be cut down.

But that our pen may not become as persistent as the foliage about which it has been scribbling, we lay it aside at once.

[Mr. Jacques has given our readers a valuable paper, and we hope his remarks will be well considered by all planters. Ed.]

ARBORICULTURAL NOTICES.

NEW MAPLE-ACER PSEUDO PLATANUS, ERYTHROCARPUM-is a new variety of sycamore, obtained from seeds by M. Ferrand of Cognac, about 12 years since. It is not remarkable for its foliage, or flowers, but for its fruits, which are of a decided dark red color, and contrast well with the doep green The fruits of many of the maples have a tendency to become red. Those of Acer tartaricum as well as certain forms of sycamore have a tolerably well marked red color, but are very much inferior in this respect to the variety obtained by M. Ferrand. The color is deepest when the fruits are voung. A figure is given in the Revue Horticole: where also is mentioned another variety of the sycamore, which has leaves of a pale green all over, and fruit like the leaves, of a very light green color, never tinged with any deeper red. The form is said to be quite distinct, and bears the name of Albescens.

NEW MACLURA-M. TRICUSPIDATA. This species was introduced to the museum establishment of Paris in 1862, from: China, and is remarkable for its leaves, which are very decidedly three-lobed. This is described by M. Carriere, as a bushy, well-branched shrub, milky in the younger parts, the branches somewhat pendent, and bearing in the axils of each leaf a sharp thorn. The leaves are deciduous, thick, and shining, shortly stalked, and deeply three-lobed, with the middle lobe lengthened out. The leaves distinguish it at once from all the Macluras previously known. It is said to be very hardy, and independently of its merit from an ornamental point of view, it is suggested that it may probably become useful for hedges. The half-ripened wood, taken off in July. strikes freely enough under glass. If this species is as hardy or hardier than the Osage Orange, it will be a desirable hedge plant for New England, where the latter is often injured by our severe winters. As seeds will undoubtedly be scarce, if it propagates readily it can soon be rapidly multiplied. worthy of trial.

RED-FLOWERED LOCUST TREE—ROBI'NIA PSEUDACACIA DE-CAISNEA'NA—is now being sent out by its raiser, M. Villevielle

of Manosque, in the form of one-year-old grafted plants. This distinct variety was raised in the nursery of that gentleman in 1862, and has all the habit and general aspect of the common Robinia, but in addition is covered with long clusters of flowers of the finest rose color. M. Decaisne, after whom M. Carriere has named it, speaks of it as likely to cause a revolution in the ornamentation of promenades. The rose color of its flowers, he remarks, can only be compared with the most brilliant varieties of Robinia hispida (Rose acacia), and would give to our parks a new aspect at a time when ornamental trees have lost much of their beauty. M. Carrière says it is destined to play an important part in the ornamentation of gardens and public-walks, for which purposes it cannot be too strongly recommended, as the tree is vigorous, and easily managed. The appearance of R. Decaisneana, he continues, will probably open a new field of interest among hardy trees, and result in the obtaining of other desirable varieties, combining with rose colored flowers, the distinct habits assumed by varieties already known. The origin of this new locust tree appears to have been quite accidental, but it will not be the less welcome on that account.

POMOLOGICAL GOSSIP.

Dana's Hovey Pear.—This new and superior winter pear was exhibited in New York before the Farmers' Club, in December last, and the following report made upon it. We have not found space to insert it before:—

Mr. W. S. Carpenter placed upon the table specimens of a new winter pear, sufficient to give every one present a practical test of its quality. It is in color yellow russet, in size and shape not unlike the Seckel. It is in good eating condition from this time until February, according to the method that it is preserved. It is deliciously sweet and melting to the taste, and it was pronounced by a unanimous vote of the Club the best winter pear known. A bushel of this variety

was on exhibition at the rooms of the Institute for the Greeley Prize of \$100, and we shall be surprised if it does not gain the award of the committee. Mr. Carpenter stated that the pear was known as Dana's Hovey, and called on Mr. C. M. Hovey, who was present, to state how it originated.

Mr. Hovey stated that the opinion had prevailed for a very long period that seedlings produced by planting the best known varieties of pears always tended back towards the wild stock. Hence the neglect of nurserymen to plant seeds, and the efforts made by Van Mons and Knight to obtain new varieties by hybridizing and impregnation. Of the ten new sorts produced by Knight, which are considered good in England, only one, the Dunmore, is excellent here. Nature and accident have given us better sorts; witness, the Washington, Sheldon, Seckel, &c. These accidental seedlings certainly did not go back. Mr. Dana of Roxbury, having determined to attempt to produce new seedlings, planted seeds of the Seckel, Beurré Diel, the Bartlett, and others of the best varieties he could obtain, and the result was that he raised six excellent new pears. This on exhibition is one of the number. first brought into notice in 1854, and known as No. 16. was pronounced so remarkably excellent by the Massachusetts Horticultural Society that Mr. Hovey purchased the original tree for the purpose of propagating from it. One of the peculiarities of this pear is that it never rots from the core. but like the apple decays first upon the surface. The bearing quality of the tree is as good as the Buffum. It has somewhat the habit of the Seckel, but this tree is more vigorous. It has thick, heavy foliage, and no disease. The fruit is about the average size of Winter Nelis. The tree grows well both as a standard and dwarf. Mr. Hovey exhibited another pear called the Caen de France, which was introduced to this country from Van Mons in 1835, and is still very little known. It is much better than the Winter Nelis and twice as large. It has one fault, it is slow to come into bearing.

Mr. Carpenter paid a very high encomium to Mr. Greeley for the offer of his liberal prizes, which alone were sufficient to attract the attention of such men as Mr. Hovey, and bring him here to make known to the world such a valuable new variety of fruit. Marie Guisse Pear.—This new pear, figured in the Revue Horticole for January, 1865, is very handsome, and has a remarkably rich, warm appearance. The fruit is middle sized, or rather large obovate, color well russeted golden yellow. Flesh melting, rich, perfumed, excellent. Season March and April. The tree is described as being very vigorous, and an abundant bearer. It is 30 feet high, and 3 feet in circumference at the base. As is often the case with seedling pears, whilst young, many of the branches are yet spiny. It was raised from seed of the St. Germain in 1834, at Jussay, a village in the environs of Metz, and fruited for the first time in 1857; in 1860 it produced nearly 600 pears. The variety was obtained by M. Guisse of Sainte Ruffine, and is named in compliment to his daughter by M. Hira, an old mayor of Cussey-les-Metz, and a distinguished vine grower.

It will be observed that the seedling just named was 24 years old, before it produced fruit; but this may be accounted for by the circumstance of the tree having been grown in rich soil, 7 feet deep. In such deep soil the pear is long before it commences to bear; but pear trees similarly situated have lived and borne for hundreds of years. Should this variety be as good in our climate as it looks, and as it has proved to be in the finer climate of the Moselle, keeping also till March or April, it will be a valuable acquisition. Some good late-keeping varieties of pears are yet desirable. (Gard. Chron.)

THE CONCORD GRAPE.—This excellent grape receives commendation from all quarters; not that it is the best native variety, but because it possesses a greater number of good qualities than any variety yet introduced. Messrs. W. & O. Smith, retail dealers in fruit, Broadway, New York, state that this grape sold for 40c. per lb., last autumn, while the Delaware and Diana sold for no higher price. As the yield of Concords is at least 5 to 1, if not 10 to 1, of the Delaware, its value as a market grape is readily perceived. The Valley Farmer thus alludes to it as a wine grape:—

"We have always esteemed this grape highly, but its estimate was greatly heightened in our opinion, by the splendid samples of wine which were exhibited and tested at the recent meeting of the Missouri Horticultural Society. There has

heretofore been a doubt about its making a light wine, but that doubt has now been completely removed. All the samples exhibited and coming from different growers from both Missouri and Illinois were pronounced excellent, and, by some of the wine committee, superior far to the renowned Catawba. For our own use we must say we prefer the Concord—one's taste needs educating to relish Catawba. But few who first partake of it esteem it highly—but by use it becomes highly esteemed. The Concord is a pleasanter wine to taste—and one relishes it from the first. . . . The dissemination of this noble grape has been a great public benefit."

New Grape.—A dried grape or raisin was recently sent to us by Messrs. Ferris & Caywood, of Poughkeepsie, New York, the production of a seedling raised by them between the Diana and Delaware, which they state it resembles, having the size of the former, and the excellence of the latter. The grape certainly tasted like a raisin, but was wanting in the rich pulp, which characterize the Malaga fruit. Perhaps, however, it may be a good substitute till a better is raised, as we have no doubt it will be ere long. We shall be glad to announce the time when "keg raisins" from abroad will be no longer wanted in our market.

TAYLOR'S BULLET GRAPE.—Wine from this grape was exhibited before a late meeting of the Missouri Horticultural Society. So highly was it thought of by the committee that one member, a heavy importer of Sherry and Madeira wines, and an excellent judge of wines, remarked that if this wine could be had, it would certainly stop the importing of these wines. Being a pretty good judge of Sherry wine, we could hardly distinguish it from that wine, and think it, if anything, superior to it. We predict that this grape will create a new era in wine making. That it will be sold for Sherry we have no doubt; and the price of all foreign wines is enormous. Taylor's Bullet is a native, and was found growing wild on a spur of the Cumberland Mountains; it is a white grape, and remarkably vigorous and healthy. It should be pruned like the Concord to get a large crop; that is, by pinching and shortening.

CHASSELAS VIBERT GRAPE.—This grape requires to be well grown, and then few can beat it. Ripens early, and the berries are very large, round, and of an amber color, and the flavor that of the Sweetwater. I have twice carried off the prizes at the Crystal Palace with this grape: the first year a first prize; the second year a second. The roof of my orchard-house (2400 square feet), has been for some time covered with the finest grapes; the rods were introduced into the house about the end of April, the peaches and nectarines having been sufficiently forwarded by heat, so as not to be injured by the shade of the vines; forty-eight dozen of peaches and nectarines were gathered in one day, and the flavor was excellent. (Cot. Gard.)

THE BUFFALO STRAWBERRY.—This is the name of a new variety which is highly prized by the possessor of the original plants. It has been stated to be the same as Russell's Prolific; but Mr. Bryant says it is distinct. The fruit is large, regular, uniform in size and shape, dark crimson, glossy, with red flesh, solid, juicy, sweet, and aromatic. Plants vigorous and productive; hardy. It is stated to be staminate, though it does not appear certain, and is said to be far more attractive than the Wilson, and to excel the Russell in beauty. The present season will no doubt decide the value of this new variety.

CASTLE KENNEDY Fig. - A new fig under this name was introduced to the trade last autumn; it was first observed growing unnoticed and unpruned against an old wall at Castle Kennedy, near Strenaer, in the south-west of Scotland. In that neglected state it was found in fine seasons to ripen abundant crops in August. The large size and fine quality of the fruit arrested attention; and in due course provisions were made to cultivate it under glass, where for the last two seasons it has produced extraordinary fruit, some of which weighed nearly seven ounces. At Castle Kennedy it has also occasionally ripened fruit when grown as a standard. pears to have been successfully exhibited in Scotland, and among other awards obtained during last summer, was a First Class Certificate from the Edinburgh Horticultural Society. Mr. Thomson, of Dalkeith, bears testimony to the great excellency of this fig, which he says has borne him the largest figs, by far, that he ever saw, the flavor being equal to that of any fig known to him.

NEBRASKA FRUITS.—Mr. R. O. Thompson, of Nebraska, sends us several very beautiful colored plates of Nebraska fruits, which he has introduced to notice, and seeds or plants of which we presume he has for sale. The following are the fruits:—

Nebraska Seedling Plum. This bears a great resemblance to the Canada plum, so called, a large, oval, scarlet fruit, though it may be quite distinct.

Thompson's Golden Gem Plum. Resembling in size and shape the Green Gage, but more yellow. Both of these Mr. Thompson warrants curculio proof, after four years' trial.

Elsdale Raspberry. A medium size, round, red fruit, borne in clusters, and very pretty.

Nebraska Prolific Gooseberry. About the size of the Houghton's Seedling, but quite round, green, with a slight tinge of red in the sun.

Dwarf Rocky Mountain Cherry. A small red fruit, of oblong oval shape, about the size of a cranberry. Leaves very narrow.

Thompson's Wine Grape. A grape apparently resembling the Isabella in shape of berry and form of bunch, quite black. Leaves deeply cut like the foreign grape.

Mason's Mountain Blackberry. A very large, round berry, somewhat resembling the Lawton in shape and general appearance.

What the real merits of these varieties are can only be ascertained by a trial, and we hope some of our cultivators will report upon their value.

THE WIGANDIA.

BY THE EDITOR.

THE introduction of ornamental-foliaged plants into our gardens has essentially changed their character, increased their picturesque effect, and given them a rank above mere

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parterres of showy flowers. Especially has it enriched the appearance of ornamental grounds, where many plants, beautiful and attractive enough in their appropriate situation, are quite out of place and do not harmonize with the heavy masses of evergreen or deciduous foliage. They add also a



5. THE WIGANDIA.

tropical aspect to the summer garden, where they flourish with nearly the vigor of their native habitat.

Among the more recent additions to this class of plants is that of the Wigandia, (W. caracasana, FIG. 5), from South America. We read a very good account of it in the Revue Horticole, a few years ago, when it was first added to the French collections; and last autumn we saw a fine plant of

it in the grounds of Messrs. Ellwanger & Barry of Rochester, which was brought home by Mr. E. on his return from Europe. As it is increased very easily both by seeds and the roots, it will soon become more common, and we hope popular in all collections of really grand plants. We add the following information in regard to it, which we translate from the work already alluded to.

The Wigandias belong to the family of Hydroleaæs, all of which are natives of America. Two species belong to Mexico, and the others to South America. Among the latter is found the most remarkable of the genus, the Wigandia caracasana, discovered by the celebrated travellers, Humboldt and Bonpland, in the neighborhood of Caracas and New Grenada, and introduced to Europe by M. Linden in 1853.

The Wigandia is a noble plant, in every acceptation of the word. It forms a vigorous shrub, 6 to 8 feet high, of pyramidal form, with broad, dark green leaves two and a half feet long and eighteen inches wide, developing at the summit, when precaution is taken to remove it to the greenhouse before frost, an abundance of bluish lilac flowers, similar in their shape and dimensions to those of the Eutoca. Nothing can be more ornamental, or produce a grander effect.

The stem of the Wigandia is herbaceous the greater part of its length, subligneous at the base, of a cylindrical form, and very straight. It is cultivated as an annual in the climate of Paris, and its strong roots send out in the autumn a great number of suckers which serve to multiply the plant. M. Byfkogel, who has grown this species about five years, cultivates it in the open ground in good garden soil, without any other care than a few waterings during the summer, taking the precaution to support its stem, to prevent injury from the wind. The same horticulturist increases it very easily by cuttings taken off during February and March, or by suckers taken up and potted in the autumn, and removed to a cool greenhouse. Cuttings of the young wood, started in October and treated in the same way, will also form strong plants.

The imposing aspect of the Wigandia, and its easy culture, render it a happy acquisition to our parks and gardens.

As it is also readily raised from seeds, we trust it will soon become a conspicuous ornament of our own gardens.

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REVIEWS.

How to get a Farm and where to Find one. Showing that Homesteads may be had by those desirous of securing them, &c. By the Author of 10 acres enough. pp. 345. New York. 1864.

This is a very interesting and valuable work, giving all the information to be obtained in reference to the value of land in all parts of the country, particularly in the middle States, of New Jersey, Delaware and Maryland, with the public law on the subject of Free Homes, and hints and suggestions to practical farmers relative to the selection of lands, their adaptation to farming purposes, the nearness of markets, and in fact all the particulars which can interest those who are seeking permanent homes. We have not found leisure to read the volume carefully, but quite enough to show its great importance at the present time, when farming is so profitable, in putting young and active men on the right track to "get a farm," with or without cost, and it should be read by all who would know "where to find one."

Woodward, Architects. With 30 Illustrations. pp. 166. New York. 1865.

This is a small but neat volume, presenting a series of practical designs and plans in domestic architecture, adapted to the requirements of all those who intend to build, remodel or improve their homes or country houses. The progress of rural architecture has been great within the last 20 years, but the more expensive works treating upon the subject,—which have undoubtedly accomplished so much in the spread of a better taste,—are beyond the reach of many, and the present work is intended to supply their place. The designs embrace the simple cottage as well as the expensive villa, and the illustrations are admirably executed. Messrs. Woodward are thorough and experienced architects, and their attempt to aid, by the dissemination of practical information, in the erection of country houses possessing more claims to architectural

beauty, will be welcomed and appreciated by every lover of rural art.

THE YOUNG GARDENER'S ASSISTANT, in three parts, with practical directions, under each head, for the cultivation of Culinary Vegetables and Flowers, Fruit Trees, &c. New edition. By Thomas Bridgman. pp. 600. N. York. 1865.

A new edition of the old and well known work of Mr. Bridgman, which has been the standard of culture of miscellaneous vegetables and flowers. If it has not the merit of supplying the most recent information in regard to many of the subjects of which it treats, it has that of being thorough and complete in all the details of the garden management of the well known and superior kinds of vegetables, flowers and fruits, and the new edition, now supplied by Messrs. Wood & Co. in a more popular and desirable shape, will be most acceptable at the present time.

OUR YOUNG FOLKS. An Illustrated Magazine for Boys and Girls. Edited by J. T. Trowbridge, Gail Hamilton, and Lucy Larcom. Monthly. Boston. 1865.

This is a new and interesting periodical, intended especially for the young folks. It is no light and trashy thing; but solid, entertaining, instructive and useful. Among its correspondents are Mrs. Beecher Stowe and the Author of Ten Acres Enough, which bespeak information of a practical as well as pleasing kind. Messrs. Ticknor & Fields, the publishers, deserve the thanks of the old as well as young folks for the undertaking.

Horticultural Operations

FOR APRIL.

FRUIT DEPARTMENT.

March has been one of the mildest and most pleasant we have had for many years. The frost has been quite out of the ground for two weeks or more, and it is now in fine condition for ploughing. No snow has fallen, and even the usual keen winds of the month have not been experienced

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more than one or two days. The spring promises a fruitful season. Grapes in the very early houses will now be nearly ripe, or all ready for cutting; where they are in this condition, give an abundance of air, and discontinue all watering. Allow the laterals to make a free growth, unless crowding the vines too much. Vines in the greenhouse or grapery will be making rapid growth from the warm weather, and will soon be in bloom: top the laterals one or two eyes beyond the fruit, and tie them in carefully to the trellis: air freely in good weather, and if there are any Muscats, or shy setting sorts in the house, shake the vines every morning while in bloom, or pass the hand gently over the bunch: damp down the house morning, noon and night, and maintain a good temperature in cool, cloudy days. Cold houses will now require attention: uncover the vines, and tie them up to the trellis. Syringe in good weather, and do not attempt to bring on the vines too rapidly. Hardy grapes may now be uncovered, and the vines tied up to the trellis. If they need pruning, attend to it at once.

Peach Trees in pots, now swelling their fruit, should have more water, and an abundance of air. This is the season to pot young trees for a fresh stock.

ORCHARD HOUSES will now require constant attention: air abundantly in good weather, and syringe the trees daily till the buds are all well started. Guard against sudden changes of temperature.

GRAFTING may be done during all the month.

PRUNING should be continued at all convenient opportunities.

STRAWBERRY BEDS should be uncovered and the soil gently stirred around the plants, destroying all weeds. Top-dress the beds if they require it, and prepare ground for new plantations.

RASPBERRIES should be uncovered, pruned, and tied up to stakes. Manure and dig the ground.

TREES of all kinds may now be transplanted.

PLOWER DEPARTMENT.

The month of April will put in requisition all the energies of the most industrious gardener. An abundance of out-door work, as well as the care of in-door plants and the preparation of bedding stock, will be sufficient to employ every leisure moment. The greenhouse and conservatory should now wear its gayest aspect, and if there is a good stock no season will be more attractive than the present.

CAMELLIAS will now be making their new growth; syringe the house every day, and supply water to the roots more freely. Shade from the hot sun, and do not allow the foliage to get burned, which greatly mars the the beauty of a fine plant.

PELARGONIUMS will now begin to throw up their flower stems; continue to give quantities of air, so as to secure a stocky growth, and water more abundantly. Tie out the shoots of specimen plants, and turn them round often to secure a handsome growth.

ABALEAS will continue to flower according to the condition in which the plants have been kept. Those now showing buds should be freely syringed till the blossoms expand, and, as they advance to perfection, they should be

shaded from the hot sun. Young stock may be forwarded by placing in a warm house, topping the new growth so as to obtain bushy specimens.

FUCHSIAS, intended for large specimens, should be shifted as they require it, and kept in a rather moist house, with a slight shade from the hot sun. Stake the plants, and top the growing shoots as they advance in growth.

CALADIUMS, now well started, should be repotted and kept in the warmest part of the house, with a slight shade in the middle of the day. Use leaf mould, peat, and a little fibrous loam, with an abundance of sand to keep it porous.

WINTER FLOWERING plants of various kinds, such as Stevias, Eupatoriums, Heterocentrons, Hoitzias, &c., should be propagated for a fresh stock.

HEATHS AND EPACRIS, done blooming, should be headed in and placed in a sheltered pit, till they are ready for planting out in the open ground.

BEDDING PLANTS of all kinds should be removed to frames, where they can be hardened off preparatory to planting out in the garden.

Tuberoses should be potted and placed in a hotbed if wanted for early bloom.

STEPHANOTUS, ALLAMANDA, and other plants of a similar kind, should be repotted, pruned in, and encouraged to make a vigorous growth.

CHRYSANTHEMUMS should be propagated from cuttings.

CISSUS DISCOLOR should be shaken out of the old soil and carefully repotted.

ACACIAS, LAURISTINUS and similar plants should now be headed in, so as to form good compact heads.

MONTHLY CARNATIONS, for autumn and winter blooming, should be planted out in good rich soil.

CHINESE PRIMEOSES, of the double kinds, should now be propagated from cuttings.

FLOWER GARDEN AND SHRUBBERY.

After the recent fine weather, the lawn will soon assume a verdant appearance, and early preparation should be made to obtain a smooth turf. Give it a thorough rolling, and, if necessary, top-dress with a little guanc. Rake and roll the walks, and where there are box edgings, trim them into shape in good season. Uncover all kinds of herbaceous plants and bulbs, and dig, clean and rake the beds and borders.

JAPAN LILIES, now coming up, should have the surface of the soil slightly stirred.

HYACINTH AND TULIF BEDS should receive attention, cleaning and stirring the surface with a light hoe or hand fork.

GLADIOLUS, TIGER FLOWERS AND AMARYLLIS may be planted in the open ground, making the soil light and fine.

Roses should be Pruned, cutting them well in; manure liberally and dig around the plants, working the manure well into the soil.

Annuals of all the hardy kinds may be planted in the open ground.

Phloxes, Paonies, and other herbaceous plants, should be divided and transplanted, as old plants do not bloom so well as young specimens.

Dahllias may be planted out the last of the month.

MR. DANA'S NEW SEEDLING PEARS.

HOVEY & CO.,

53 N. MARKET ST., BOSTON,

Offer for sale, a fine stock of these new Pears, which have been proved the most valuable acquisitions to our collections of this delicious fruit. They have now been exhibited several years before the Massachusetts Horticultural Society, and a trial of the fruit has called forth the highest praise from all who have had an opportunity to taste them. A silver medal and gratuity of \$20 were awarded Mr. Dana in 1860 for the production of these pears.

The names and descriptions are as follows:—

DANA'S HOVEY,

Fruit nearly medium size, about three inches long and two and a half in diameter, of obtuse pyriform shape, with a clear, rich cinnamon russet skin. Flesh white, melting, buttery, and juicy, with a honied sweetness, and a most luscious and undescribable flavor, more like some delicious sweetmeat than a fruit. It ripens in December, and is in eating until the end of January, never rotting at the core. \$1 each.

The tree is one of the most beautiful of all pears. Large bearing trees, \$3 to \$5 each.

AMERICA,

The size, beauty, and excellence of this variety, and the hardiness, vigor, early bearing, and great productiveness of the tree, will take the place of the Beurre Diel as a December fruit. 75 cts. each.

EXCELSIOR,

No pear of the season is equal to this. Neither the Belle Lucrative nor Bartlett equal it. The tree is a fine grower and an early bearer, with wood similar to the Bartlett, from which it may have originated. 75 cts. each.

SHAWMUT,

Fruit large, about four inches long and three and a half in diameter; obtuse pyriform in shape, with a yellowish skin, more or less traced with russet. Flesh yellowish, melting, and very juicy, with a brisk, vinous, musky flavor, resembling the Beurré Superfin. Ripe in October and November. \$1 each.

ADMIRABLE,

Fruit large, about four inches long and three and a half in diameter; roundish ovate in form, with a yellow skin. Flesh white, melting, buttery, and juicy, with a rich musky, vinous, and delicate perfume. Ripe in October. 75 cts. each.

AUGUSTUS DANA,

(No. 10.)

Fruit medium size, about three and a half inches long and three in diameter; form obovate; flesh white, melting, and juicy, with a saccharine, rich, and delicious flavor. Ripe in October. \$1 each.

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> No. CCCLXV. MAY, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMERICA.

BONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFOED, WORCESTER, ROCHESTER, BUFFALO, CLEVELAND, WILMINGTON, ETC. ETC.

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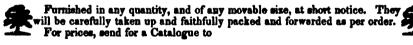
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- Black Alicante. (Meredith's.) One of the handsomest and richest flavored grapes, the freest setter, and one of the best keeping sorts, equal to the Barbarossa; berries black. It has taken numerous first prizes at the great exhibitions of grapes in London.
- Frankenthal. An old but magnificent black graps, which was among the finest specimens cultivated in the grapery of the London Horticultural Society.
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- Ingram's Prolific Muscat. A very fine black graps, ripening as early as the Black Hamburg, with all its good qualities, and a slight Muscat flavor; bunches large, nine inches long, and sets freely; one of the best grapes for pot culture.

93 Kilby Street, Boston.

AMERICAN POMOLOGICAL SOCIETY.

In our last number we gave a report of the discussions upon apples and grapes, which, though brief, could not well be extended, without occupying more space than we could spare. Less complete it would not have conveyed the ideas of those who gave the information.

Perhaps the discussion on pears may not be so important just at this time, now that the season for planting is nearly over, but it will be none the less valuable for future reference, while the report upon strawberries, will be timely, and of We therefore improve the opportunity to proceed with our review of the Society's volume. A portion of the afternoon was passed in discussing the cultivation of vinevards, in which Dr. Warder gave an account of the system pursued by the vine-growers around Cincinnati. Nothing particularly new was elicited, but the information was valuable, because it gave the experience of the most extensive cultivators, where grape-growing had been made a subject of particular investigation and study. Mr. Knox, who had also been a successful grower of grapes for market, and Dr. Grant, who had been a raiser of vines for sale, gave some account of their practice, with the mode of manuring, training, &c. shall endeavor to find a place for the substance of this discussion at another time. Erroneous views of the culture of the grape have been prevalent, and some notice of the different modes pursued by different growers cannot fail to be interesting, and perhaps important to all who are interested in grape culture.

PEARS.

DOYENNE DU COMICE. C. M. Hovey said this was a new pear; had fruited at Boston for a few years. At first there was some doubt as to its hardiness, and it was stated that the fruit blows off easily; but further experience proved it no more faulty in these respects than many others. Tree healthy, vigorous, upright, and ripens its fruit readily; in vol. XXXI.—No. v.

quality unexceptionable; ripe the last of November, and keeps into December. It has a short stem, and certainly blows off more easily than the Urbaniste. Field said he had heard that it spotted like the Glout Morceau. Mead said it was of large size, juicy and spicy; to be highly recommended. Mr. Downing's experience with it was the same as Mr. Hovey's, in every respect.

DES TONGRES. Specimens from Messrs. Hovey & Co., and Mr. C. M. Hovey stated that the principal cultivators around Boston had been unfortunate with this pear; that the tree is rather more tender than most pears, and that they had not generally fruited it. The tree drops its leaves rather early, and does not seem to thrive well in damp soils. But it was grown by some amateurs around Boston with great success. Soil generally light. He regarded it as a valuable pear. Smith of Syracuse said it was a tender tree and poor grower. but a rich pear, though too acid for his taste, and he would not recommend it for general cultivation. Dr. Houghton of Philadelphia had two hundred trees, and it had the poorest wood; a feeble grower, like Winter Nelis; winter kills, and is difficult to manage. Mr. Hovey added that it did not do well in cold stiff soils, but required light sandy land. Downing had fruited it, a fine autumn pear, and vigorous grower; was one of the vinous pears, did not do well on the quince. Field said it showed no signs of tenderness with him, and dwarfs did well; soil sandy; will become a favorite as the trees get older. Hooker had fruited it; in light soil it is a fine pear for those who like vinous pears; but it was, as Dr. Houghton stated, a bad grower, poor wood.

WILMINGTON. Mead said it was one of Dr. Brinckle's seedlings; just below medium, tender, melting, spicy, first rate.

Sheldon. Hooker said it was one of the best, and what is known of it is favorable. Mr. Hovey said that in Boston it was the finest pear of the season, both as regards growth of the tree and character of the fruit. Has no defect. It was at one time thought tender, but has not proved so. Judge Hoadley said it was one of the best of pears in his State; hardy and excellent. Kelsey said it was hardy in Illinois and Wisconsin. Haskens, that it had proved satisfactory with

him. Mead stated it was one of those unusually good pears, against which nobody has anything to say. Edwards of Missouri said it had done well, and gave excellent satisfaction in his State. Mr. Hovey said it did not do well on the quince; was an early bearer and an ornamental tree. Barry and Thomas said it did well double worked. Mead said it bore well and constantly on the pear stock; and also did well with him on the quince. Ellwanger said it would not do on quince. Nelson of Ind. thought it as hardy as any of his pears. Bort said it was a favorite, and hardy.

BEURRE' CLAIRGEAU. Barry said it was not so melting a pear as it ought to be; bears young, and, on the whole, he regarded it as valuable; does not do well on quince stock; is a splendid market fruit. Field said it had great beauty of color; a hardy tree, and a fine market pear; is prolific, bears regularly, and does not drop its fruit; it is not so good quality as he could wish it, but he had eaten better specimens than he had raised. Hovey thought it a handsome and excellent pear, often a really fine pear, and a handsome tree; does not grow on quince. He thought it ought to be cultivated more extensively. Dr. Houghton said it had a great reputation at Philadelphia, had many trees double worked, and was a fine grower on pear or quince, if properly managed; quality variable with him; showy and good for market; but could not be said to be very good, at least he had never seen it first rate. Smith said it was not hardy with him, though more so than the Bartlett. Ellwanger said it was hardy with him.

BEURRE' LANGELIER. Barry said it did not bear young, but was a good winter pear; keeps longer than Beurré d'Anjou or Beurré Diel; it was a very good pear. Hovey stated it did not bear freely until the trees were old, on the pear, and was rather impatient of the knife on that stock, but at a proper age it was one of the greatest bearers, is juicy, vinous, spirited, and a good winter fruit, keeping till the first of February. Thomas said a dwarf, planted six or seven years in his garden, was in full bearing.

Bonne D'Ezee. Field said the fruit was the type of excellence ripened in the house. Barry said the tree was nice and compact, but the bark cracked, as did the fruit, some-

times. Field said a little better culture rendered the bark smoother.

DOYENNE D'ALENCON. Bergen said it was a pear of good quality, and a good keeper. Ellwanger said it grows better as it grows older, a fine bearer, and fruit of first quality. Dr. Houghton said it was an excellent winter pear, substantial, easily managed and very good. Field said there was not a single winter pear in the list which succeeded in his soil except the Lawrence, which is hardly a winter pear. Barry considered it a valuable pear, not quite as good as Easter Beurré, but a hardy tree, and keeps well till April. Nelson of Ind. regarded the whole list of winter pears a failure,(!) not perhaps in all localities, but as a general thing. Dr. Houghton very properly thought this was because they were not picked and treated properly. Thomas said the Lawrence and Winter Nelis, were not failures.

COLUMBIA. Barry said it dropped from the tree, otherwise a splendid pear. Parsons said when the trees get age, and are sheltered, it does not drop. Mead thought it only a second-rate pear. Hovey said it blows off easily, but was a valuable pear, and had been overlooked; ripens up beautifully, and it will be thought more of than it is now. Judge Hoadley regarded it as a first-rate table fruit, and a great bearer.

QUEEN OF AUGUST. Harkens regarded it as a good pear. Downing said it was the same as Hosen Shenk.

STEVENS'S GENESEE. Barry said it was not high-flavored, but good; rots quick, and must be soon eaten after gathering. Must be picked early. Hooker said it was variable with him.

Andrews. Hovey said it had been received from France as the Beurré Oudinot, hardy, and a great bearer, sold well in market; it is a good pear. Warder said it was an early and abundant bearer, and a vigorous grower, and was liked much in Ohio. Thomas said it bore early. Field said it was a slow grower. Barry said it succeeded well with him.

BEURRE' D'AMALIS. Field said it was quite indifferent in quality, but is large, productive, and good in color; as near good for nothing as can be. [We regret to differ so

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widely from Mr. Field. Gathered in season it is an excellent pear. Ed.]

BERGEN. Bergen said it was not so good as Bartlett; but was profitable; ripens in October, and sells at the same price. One of the six most profitable pears in cultivation, bears early on pear. Judge Hoadley said it took well on the quince with him.

BEURRE' HARDY. Barry said it was a high flavored pear, much like the Sheldon; a good pear, but does not keep long enough. Downing said it was promising with him—a fine pear, and he would not like to be without it.

FLEMISH BEAUTY. Nelson wanted two stars [in the Catalogue] added for Northern Indiana. It is the star pear for that State. Dr. Warder said it was better north of 40° than south of it. In the latter it rots at the core. Beeler said it stood just as high in Central Indiana. Bateham said it was not a "beauty" in Ohio.

BEURRE' MONTGERON. Field wished this pear added to the list.

JAMINETTE. Ellwanger said it was one of the finest growers he had, but late in bearing. Fruit large, keeps till middle of December. Good, but not best. Smith said the fruit had a thick skin, and transports well. Hovey said it was an old pear, with a coarse skin, not much flavor, and not desirable, as we had plenty better pears of its season.

LE CURE', or VICAR. Harkens wanted to know about its quality. Field said it was indispensable in a pear orchard. Muir said twice in five years it had winter killed in Missouri. Bort said it was hardy with him. Dr. Warder said it was a great cooking pear, and most valuable for canning. Field said his family cooked no other pear, and, when ripe, eat no other. Beadle, it was useless and worthless with him. Thomas said in warm autumns it was pretty good, not otherwise. Downing never saw it fit to eat, but the best of all cooking pears: Hovey said it was not first-rate, but desirable. Sold well in market.

Kingsessing. Hooper said it was a good grower on quince; fruit excellent, thinks highly of it. Parry said it did well with him,—gives great satisfaction. Hovey said there was

but one objection to it; it blows off easily, otherwise excellent. Hooker said it was a beautiful fruit, a vigorous tree, and grows better as it grows older, thought it would become a good market fruit. Hovey said it never rotted at the core.

FREDERICA BREMER. Ellwanger said it was an indifferent fruit. Barry, that it was quite variable in quality.

Manning's Elizabeth. Downing said it was only a first rate amateur pear, too small for market. Bergen said it was grown with profit at Monmouth, N. J. Hovey considered it the best early pear for market; ripe the 3d week in August, a great bearer, and sells well. A most desirable pear, and very beautiful. Dr. Houghton said it was gaining in reputation in all directions. Beeler thought it one of the handsomest of early pears.

KIRTLAND. Field said it had proved worthless with him, rots badly at core. Downing said it rotted on young trees, but less on old trees,—a fine pear. Thomas said the flavor was good, but unfortunately it rots. Hooper had abandoned all idea that it will ever be of any value. Hovey said it was faulty, rots badly, and could not say much in favor of it.

MARIE LOUISE. Field said it was large, fine, fair, and of delicious flavor. Downing said it improves as the trees get older. Smith had had fine specimens, rich and spicy. Hovey said it was one of the very finest pears. Dr. Houghton did not understand why a tree should not perfect fruit young just as well as old.[!]

OSWEGO BEURRE'. Hooker thought it one of the best, bears early, and well, both as standard and dwarf; sometimes cracks. Hoopes had full crops, but no good fruit. Thomas said it cracked badly, as did also Nelson and Bergen. Hovey said it required thinning to get good fruit, and, with proper attention, he thought it one of the best.

MUSKINGUM. Field said on pear it is a fine fruit.

BEURRE SAPLIER. Barry said it was an excellent pear, as good as Belle Lucrative.

HOWELL. Barry thought it one of the most promising of American pears, though not equal to Sheldon in flavor. It is a month later than Bartlett, is fair, and grows well on

quince. Hovey had fruited it for several years, and considered it very valuable, always handsome and good.

This ended the discussion on pears.

PEACHES.

HALE'S EARLY. Batcham regarded it as the very best of our early peaches, and a great acquisition. Tree healthy, thrifty, and hardy. The fruit is only too good—too juicy for transportation to long distances; ten days earlier than Troth's Early. Marshall endorsed what Mr. Batcham said. Thomas found it early. Parry and Mead thought it the earliest good peach.

RASPBERRIES.

PHILADELPHIA. Parry said it originated in the County of Philadelphia; perfectly hardy, crop uniform, never protected it; canes strong, smooth, purple in color; fruit large, productive, yielding 220 bushels per acre; flesh firm, carries well; slow to propagate. Knox did not esteem it so highly. Bergen thought it the same grown forty years ago, then called the Red Raspberry.

STRAWBERRIES.

[Mr. Knox opened the discussion by the very remarkable statement that "it is or ought to be, well known, that varieties deteriorate," and their value depended upon locality and cultivation. We were not present at the time, or we should have controverted this so far as regards deterioration; that some soils are more favorable to certain sorts than others there is no doubt, and that cultivation has a material effect upon the crop. But if we are to understand that a variety deteriorates when the proper soil and culture are given, this we deny.]

Mr. Knox cultivated the Baltimore Scarlet, Burr's New Pine, Jenny Lind, and Golden Seedling, the last named excellent. The Fillmore, he thought, had been overlooked. Russell's Prolific is of great worth, will plant it largely. Trollope's Victoria, Nimrod, and British Queen, he recommended as foreign varieties.

Russell's Prolific. Hooker said it was a productive berry; large, handsome, good quality; not very firm, for home use excellent; it is pistillate, which he thought a drawback. Perry said it had given great satisfaction in N. J. It is considered the best. Has competed with other varieties on exhibition, and in market, and succeeds in winning favor. Wilson's is used as a fertilizer. Parsons liked the fruit much.

BUFFALO. Barry inquired if it was not identical with the Russell's Prolific? Hooker did not think it was. Bragden thought there might be a similarity in foliage and habit, but the form and general character of the fruit was distinct, and not so good a flavor, or so sprightly and acid. The Buffalo was hermaphrodite.

TRIUMPH DE GAND. Parsons said some people regarded as worthless as a market berry. Harkens said it was not found profitable in North Pa. Parry said it did not succeed in N. J.

AGRICULTURIST. Mr. Mead gave a flaming account of this new berry; grows to an enormous size, and enormously productive; a strong grower; had seen berries measuring between seven and eight inches in circumference; color not the best, but good, and the same may be said of its quality. On the whole the most remarkable strawberry ever raised, and throws entirely into the shade such plants as Wilson's. Mr. Bergen had seen the plant and its fruit, and confirmed all that Mr. Mead had said of it.

FRENCH'S SEEDLING. Parry said the fruit was large, early, good quality, and very attractive in appearance; plant vigorous and spreading rapidly in all kinds of soil. Color bright scarlet, attractive, goes into market the very first, and commands the highest price; not quite so early as the Early Scarlet, but is close to it, and much larger; seems to combine the good qualities of the Early Scarlet and Hovey's Seedling. An accidental variety found in a meadow, hermaphrodite. Meehan said in Philadelphia it was as popular as any variety in market. The Triumph and Wilson are also popular, and the Hovey has almost disappeared. The Lady's Finger is largely sold.

Boston Pine. Knox said he wanted it distinctly understood that there is no Bartlett Strawberry; it and the Boston Pine are identical. The Society voted to reject the name of Bartlett.

JUCUNDA. Warder wanted to know something about it. Bateham saw it at Cleveland, where it came from Washington. No foreign variety he had seen equalled it, except the Triumph. He thought it identical with Mr. Knox's 700. Mr. Knox said his 700 was not a name, it was so numbered by him, and he wanted to find out what it was; he thought it a beauty, no matter what name it bears. Dr. Warder thought the two identical.

Excepting some miscellaneous information introduced in the discussion of other matters, this was the closing of the discussion upon particular fruits.

The evening sessions, as well as some brief discussions during each day, were devoted to the vineyard culture of the grape, peach culture, cranberry culture, ripening and keeping winter pears, and injurious insects, the last of which was continued principally by Dr. Trimble of N. J., who has made the subject a study, and who intends to publish a Treatise upon Insects. We shall endeavor to find space for the most interesting portion of these several subjects.

PEAR TREES IN POTS.

BY T. RIVERS.

We have already, in our previous volumes, and especially in our remarks upon Mr. Brehaut's Treatise, given our views respecting Orchard-House and Pot-Culture of trees, especially of the hardier and certain fruits, which may be easily raised in our climate. As objects of profit it is not expected that they will receive much attention; but as objects of interest and beauty, as sources of continued recreation and pleasure in tending, rearing and growing them, as well as a means of procuring specimens of the very best fruits, they will be more and more cultivated, and become indispensable additions to every complete collection.

Dr. Diel, the celebrated German pomologist, who cultivated and proved all the fruits of his day in pots which he so accurately described in his valuable work, was an enthusiast in this mode of culture, and thought far more of his grafted trees than he did of the most beautiful flowers. After, as he says, wasting his leisure evening in cultivating flowers, which "required fifty weeks of care for two weeks of pleasure," he gave them up, and his flowering fruit trees became his pet flowers, as they did those of many of his friends, who became imbued with his enthusiasm and zeal. We shall not, like Dr. Diel. call that time wasted which nurtures and tends the beautiful plant, even if it does not give us but a short season of bloom, but we see no reason why fruit trees may not be made ornamental as well as valuable, and we doubt not that fruit trees in pots, will be as generally cultivated as they were nearly a hundred years ago, by the German lovers of delicious Those who think the idea new have only to consult Dr. Diel's work on Pomology, to show that it is an old, well tried and sure method of raising the finest specimens.

Mr. Rivers, to whom we are indebted for his exertions in reviving this species of culture, and who has introduced it somewhat extensively to notice, in an excellent paper in the Gardeners' Chronicle gives his experience with pear trees in pots. As a safe guide to new beginners, we give his entire article, and commend it to all who are desirous of giving this mode of culture a trial:—

How almost absurd it seems even now, how absurd it would have been thought a few years ago, to write on such a subject: for one is so inclined to think of a small stunted plant confined in a pot, and always crying, like Sterne's starling, "I can't get out." Thanks to the acquirement of knowledge under difficulties and prejudices, this idea has vanished, and those who have gone into the culture of fruit trees in pots are now surprised that it has been left to the present age for its development. The great source of success is undoubtedly the modern method of feeding trees by rich surface dressings; at one time a plant or tree placed in a pot was duly watered, but never fed, so that at the end of summer its hard

ball of earth was without nutriment, which had all been washed out of it, and the tree consequently starved.

There are no fruit trees that so fully return thanks in kind for liberal surface feeding as pear trees on quince stocks, and none that can be kept more fully in a state of robust health in pots. This is owing to their numerous fibrous roots, which readily come to the surface with open mouths if rich food is given to them.

Pear trees may be potted at any time from November till the end of March, and curiously enough, if potted when the blossom buds are bursting, they will often bear a fair crop the same season. The pots best adapted for them are 13-inch, and in these, without repotting, they will continue to grow and bear fine fruit for 10, 15, or more years, the only culture required being top-dressing and surface-dressing. The former should be done in November, by taking out the surface soil four to five inches deep, and replacing it with some fresh compost well rammed down; the latter, in June, by giving some rich surface dressing, so as to lie two or three inches above the rim of the pot, forming a reservoir surface to hold water. This dressing should be repeated in July, and again in August; it'may be made with horse-droppings from the roads soaked with liquid manure, and mixed with a small quantity of loam, or by the best of all surface feeders-the former material and malt or kiln dust, equal quantities, satuurated with liquid manure—this should not be laid in a heap, or fermentation makes it smell like a den of very dirty wild The compost for potting and top-dressing in autumn should be garden mould or sandy loam, two-thirds, and rotten manure one-third.

With regard to the management of the trees after being potted, the pots should at once be plunged in the ground to three-fourths of their depth,* and if in autumn, some litter, leaves, or manure should be placed on them to protect their roots from frost. As but few trees will be likely to bear the first season, they may remain plunged throughout the summer. In the autumn all will be found studded with blossom

^{*} If the soil be light and sandy, the pots may be plunged to their rims; if cold and stiff, not so deeply.

buds. In November they may be removed to their winter and spring quarters, which may be (if no glass-roofed sheds are convenient) a lean-to shed of any kind, sloping to the N. E., and closed there, but open to the S. W. Three or four rows of trees may be placed here in front, the pots partially plunged and protected with manure; and here they may remain till they have blossomed and set their fruit; in short, till all danger from spring frosts is over, which here in Hertfordshire is not till the first week in June. They will require duly watering, perhaps once a week, commencing the first week in March.

When the fruit is fully set and safe, the trees may be removed to their summer quarters; the pots plunged, and surface dressings given as above directed.

The very finest pears may be grown by this method of culture in all climates warm enough to ripen them. In cool climates the orchard-house must be called into requisition. Mr. Thomson, of Dalkeith, has, I believe, grown pears on trees in pots under glass much finer in every respect than those from his wall trees. This is quite enough to decide the question as to the feasibility of growing pears in pots in a cool climate. Here, where they bear well, and ripen their fruit in the open air, they are most interesting, and give but little trouble.

With regard to the quantity of fruit borne by trees in pots as compared with wall trees, I have frequently seen more pears on a nicely pruned pyramid of four or five years old than on a straggling wall tree five times that age; for if well fed, and their shoots pinched in in summer, pear trees in pots become most remarkably prolific, and above all, they are always healthy and free from canker.

If pyramidal pear trees in pots are attended to in summer by pinching off the ends of all their young shoots as soon as they have made three or four full-sized leaves, they soon become models of perfection both in form and fertility; but the great advantage derived from their culture is the facility of removing the trees to a place where their blossoms can be protected from our spring frosts—the greatest evil we have to guard against in pear culture, for it is now well known that MAY. 141

pear trees on quince stocks always show abundance of blossoms, yet too seldom give a good crop.

Another advantage this mode of culture gives is that of making the cultivator independent as to the nature of his soil. It may be chalk or clay, gravel or sand, yet a few bushels of good loam and manure in which to put his trees make him free of all anxiety on this head. There is no fear of the roots of his trees penetrating to an unfavorable substratum, for if surface dressing is freely given in summer, the roots seem almost by instinct to come up to feed, and scarcely attempt to enter the soil beneath the pot. If they ever do this, the annual removal of the pots to and from their winter and spring quarters is quite a sufficient root-pruning.

Although I have mentioned the front of any shed open to the S. W. as being calculated to give sufficient shelter to the trees during their blossoming period, there is no doubt but that a roomy airy orchard-house would be far better. I mentioned a shed to show very humble cultivators what may be done if they happen to have one ready built. If a shed is to be built there is nothing better or cheaper than cheap 21-oz. glass-" fourths" as it is called in the trade-to roof it with. A lean-to shed 10 feet wide, and 20 or 30 feet long, would shelter a great number of trees; but instead of its roof sloping to the N. E., as recommended for common sheds roofed with slates, or thatch, or felt, it should slope to the S. W.; the back may be eight feet in height, and the front four feet, the back (and ends if the place is exposed) close boarded and the front open. Gardeners and amateurs are, as far as I have seen, not at all aware of the usefulness of these lean-to glass-roofed sheds open in front; they should have their rafters 20 inches asunder, and if glazed with the above-mentioned cheap strong glass their cost is but trifling. In climates not sufficiently warm to ripen pears, the trees might remain in them the year through; there are also many garden crops that might be cultivated under them. Intelligent gardeners would make good use of them if once established as necessary appendages to a garden. With regard to fruit trees in pots, one can scarcely calculate the advantages to them from being under a roof during the winter; their roots are sheltered from the heavy cold storms of winter, and become ripe and hard. I am at this time building one of these lean-to glass-roofed sheds 200 feet long and 14 feet wide, with a very old Yew hedge for its back wall; it is open in front, and intended merely for the shelter of fruit trees; its climate will be dry, the great desideratum in England.

As this shed is built after rather an original method, and not a brick used in its construction, although its foundations are perhaps nearly as durable as brick, it may be worthy of a short description,

Its posts, on the top of which is laid the plate, are of deal, and five inches by four. These are let into cast-iron sockets two feet long, five inches by four in diameter outside measure, and four inches by three inside measure; each socket has a flange at bottom 31 inches wide, which forms a footing of about one foot in diameter, and if the soil is well rammed, this holds the building fast. These sockets are let into the earth to the depth of fifteen inches, leaving nine inches of the iron casing above the surface of the soil. Each post is let into the socket one foot, and rests on a shoulder, so that when fitted in, the iron socket and post fit accurately, and have a very neat appearance. The advantages of building light glass-roofed sheds after this method are obvious enough. If a tenant wishes to remove his glass-roofed shed, which may perhaps be a vinery or a peachery, he has merely to draw the posts from their sockets, leaving them in the unbroken ground for his landlord. 2. There are no foundations to dig. or bricks and mortar—those detestable nuisances—to be carted. 3. They are light and airy, and as useful as if built by what the Yankees call "a ponderous British builder."

POMOLOGICAL GOSSIP.

THE GRAPES IN THE LONDON HORTICULTURAL SOCIETY'S GARDEN.—We have in our late volumes given much information in relation to the collection of grapes cultivated in the Society's garden at Chiswick, which was made with a view to

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test the qualities of the various grapes. The Gardeners' Chronicle contains a notice of this collection, which may interest grape growers, and we copy the information in regard to the same. The grapes were planted seven years ago, and many of them have been removed and replaced, or grafted with other sorts. Thirty varieties were exhibited October last. No extraordinary pains were taken in preparing the border, and half were planted inside and half outside. The strongest plants, all other circumstances being equal, are those having their roots outside, and they have the largest bunches and berries.

The thirty varieties exhibited form only part of the large collection which exists at Chiswick. The best for a general crop among the black sorts is unquestionably the Black Hamburgh, and especially that variety of it called the Frankenthal. The Dutch Hamburgh is larger, but comparatively coarse, and is by no means to be preferred. The Muscat Hamburgh is esteemed by those who like the Muscat flavor; its bunches and berries are improved in size by being grafted on the Black Hamburgh, on which it also sets better, Esperione colors well, being of a bluish black; but we observe that under this name the true sort is not always met with. The Black Prince is well deserving of a place in a collection: some remarkably fine bunches of this old variety were exhibited in the past season. The Morocco Prince, said to have been raised between the Black Prince and Black Morocco. has a sprightly flavor. Burchardt's Prince is capable of being grown to a large size, but it requires rather more heat than the Black Hamburgh to develope it in full perfection; it hangs well, forming a succession of the Black Hamburgh varieties. The same may be said of the Black Morocco. a late sort, Oldaker's West's St. Peter's must be reckoned very useful; although not so large as the Black Barbarossa, its bunches are more compact. As a late sort, however, Lady Downes' Seedling is perhaps the best for flavor, and it produces handsome bunches of a fine black color. Catalenesia Nera has tolerably large bunches, black, as its name implies, but the berries are not sufficiently large. The Black Monukka forms a large bunch, with berries not very large, but stoneless. This being the case, it may become valuable as a stoneless raisin grape in those countries or colonies which possess a climate sufficiently hot and dry for rendering the fruit an article of commerce. The Siderites Smyrna is a large late grape, but coarse-fleshed and hollow:

Of the white grapes exhibited, the White Muscat of Alexandria must still rank at the head; for although the Canon Hall Muscat is larger, both in bunch and berry, yet it is not so rich; still it is a noble looking grape, and well deserves cultivation, but by no means to the exclusion of the old sort. The Royal Muscadine is a good bearer, and can be grown where a less degree of heat can only be afforded than that which the Muscats require. Reeves' Muscadine forms a compact bunch, will succeed in the same temperature as the preceding, and is deserving of cultivation. Of the old and deservedly much esteemed White Frontignan good bunches were exhibited; and there were very fine bunches of the Golden Hamburgh. The White Nice is not reckoned firstrate as regards flavor; but its bunches are large, hang long, and are sometimes ripened to tolerably good flavor. Blussard Blanc is a wine grape. The Raisin de Calabre is good looking, hangs long, and is sometimes desirable and useful on account of these properties; in quality it is tolerably good, but not rich.

Of red or rose-colored grapes, the Chasselas Rose de Falloux has a long slender bunch, with berries of a beautiful reddish tinge. The Tokay des Jardins resembles the preceding, but is not so good. The Ahbée, an Indian grape, from the Deccan, is always much admired for its beautiful rose-colored tinge; it has a Sweet-water flavor, but is not rich.

From this exhibition it will be seen that by fruiting the numerous varieties in the extensive collection of the Royal Horticultural Society at Chiswick that have yet to be proven, and exhibiting them, a knowledge of the best varieties may at length be disseminated amongst those interested in the cultivation of this excellent and highly useful fruit; and by making selections again and again, those most worthy of the expense and care attending their production need only be ultimately employed. Thus we may ensure in this country

the finest grapes in the world. This too, we may observe, is creditable and legitimate work for a horticultural society to engage in; and it alone stamps a value upon plain practical Chiswick, which is to be sought in vain in acres of fashionable parade ground.

DESCRIPTIONS OF SELECT PEARS.

BY THE EDITOR.

WE add two more to our list of pears,—not new varieties,—but which are, as yet, very little known, and have not fruited only in amateur or select collections of the pear.

Paul Theliens. Album de Pomologie, Vol. I.

This variety was received by us, with many others, from Belgium, as long ago as 1854, but the trees have not borne scarcely any fruit till last season, when the crop was large, and the specimens excellent. Previous to that time the few specimens had been imperfect and under-sized, showing that, like most other pears, its real characteristics cannot be judged until the tree gets age.

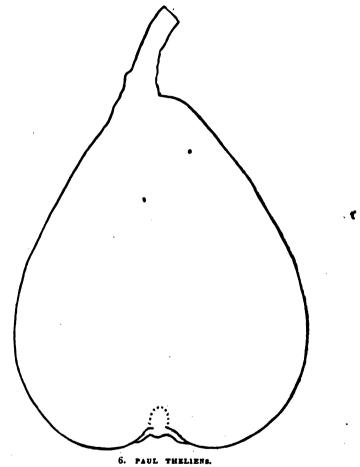
The Paul Theliens (FIG. 6) is stated in the Album de Pomologie, where it was first figured, to be one of Van Mons's seedlings, and the tree of which first bore in 1844. It was dedicated to M. Paul Theliens of Jodoigne. It was from the same lot of seeds as the Lucien Le Clerc.

The tree is pyramidal in habit, vigorous, and has, as M. Bivort says, a most "magnificent aspect." It comes in at a season when we have but few pears, and, so far, appears a valuable addition to collections.

Size, large, about four inches long, and three and a half in diameter: Form, oblong obovate, large at the crown, narrowing into the stem, where it is rather thick and fleshy: Skin, fair, smooth, yellowish, with a pale blush in the sun, slightly russeted in the shade: Stem, rather short, about three-quarters of an inch long, very thick, stout, fleshy, and attached by a wrinkled and fleshy junction, oblique: Eye, medium size, open, and

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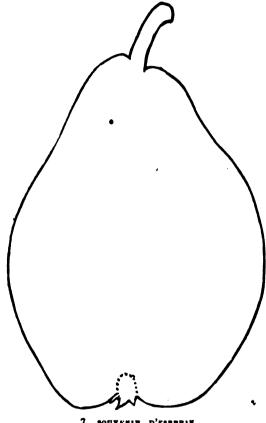
considerably sunk in a regularly deep russeted basin; segments of the calyx short, stiff, projecting: Flesh, yellowish, little coarse, melting, juicy, with a pleasant, slightly perfumed



aroma: Core, rather large: Seeds, very large, long, and sharply pointed, dark brown. Ripe in November.

SOUVENIR D'ESPERIN.

A specimen of this pear was kindly sent us last fall, by the Hon. Marshall P. Wilder, in whose collection it has fruited for one or two years. It is a large, showy, and very good pear, and if the characteristics of the tree are as favorable as the quality of the fruit, it will prove a good addition to our collections. Not knowing what these are, our trees not having yet borne, we describe the pear, and shall watch the growth and bearing of the tree.



Size, large, about three and a half inches long, and three inches in diameter: Form, pyramidal, largest near the middle, rounding off to the crown, and tapering to an obtuse point at the stem: Skin, fair, smooth, dull yellow at maturity, mottled with red in the sun, and nearly covered with thin tracings of light russet inconspicuous yellow dots: Stem, rather short, about half an inch long, stout, straight, and inserted without any perceptible cavity in the obtuse end: Eye, small, nearly closed, and moderately sunk in a small, somewhat furrowed basin; segments of the calyx fleshy, incurved: Flesh, yellowish white, fine, melting, with a brisk vinous, slightly perfumed juice: Core, medium size: Seeds, small, light brown. Ripe in November.

THE DISCOVERY OF VICTORIA REGIA.

BY SIR ROBERT H. SCHOMBURGK.

THE latest English papers announce the death of this eminent traveller and author of various works on Natural History, at Berlin, on the 11th of March.

We happen to have in our possession a very interesting letter from Sir Robert Schomburgk, giving an account of the discovery of the Victoria Regia. We had intended to publish it some time ago, but papers of more immediate interest, to a majority of our readers, induced us to lay it aside. His death will give it additional value, and it cannot otherwise than be interesting to every genuine lover of plants.

It will be recollected that Mr. J. F. Allen of Salem, published a beautiful work on the Victoria Regia, with superbly colored plates by Wm. Sharp. Upon its completion Mr. Sharp sent a copy to Sir Robert Schomburgk, then British Consul at St. Domingo. The letter is dated February, 1858, and is in acknowledgment for the copy. It will be noticed that he gives due credit to Mr. Sharp for his artistic delineation of the flowers, as well as to Mr. Allen, for his enthusiastic and faithful description of the magnificent lily:—

BRITISH CONSULATE, SANTO DOMINGO, February 16, 1858.

My Dear Sir,—I had yesterday the great pleasure of receiving your handsome present of the beautiful work, describing the "Victoria Regia;" and as it happens that an opportunity offers itself just now for the United States, I take the pen to express to you my kindest and sincerest thanks.

When opening the large package, which contained this splendid specimen of art and typography, I had no idea of its contents—my friend, Sir William Hooker, not having written to me. Imagine, therefore, how surprised I was to see those splendid representations of the beautiful plant I discovered in 1837.

The description, as far as the short time since I received it has permitted me to peruse the letter press, is delightful, and written with enthusiastic feelings for so worthy a subject. The plates are splendid—as well in conception as in execu-I miss in the coloring the vivid crimson, changing into a brighter hue towards the base of the petals, which are so peculiar to the flower in its native regions. In this regard it is well represented in Curtis's Bot. Magaz., the flower in Table 4276, the bud in 4278. The turned-up edge, and underside of the leaf are likewise much more brilliant in color than represented in your handsome plates. This naturally arises from the want of intense light and congenial rays of the tropical sun, and from cultivation in a confined artificial atmosphere. The flower itself seems to sport not only in color, but likewise in shape of the coronet. The time of opening is different in nature. I never saw a flower opening during noontide, or in the afternoon, as your Salem plant When commencing with daybreak our journey, I frequently witnessed the first opening of the bud, pure white, as it is so nearly represented in your second plate; only that the calyx is somewhat fuller and broader. At that time the delicious odor spreads, and scents the air for a considerable distance, but at noontide the flower is nearly scentless; the first blush of the young flower appears three or four hours after opening, and increases to spread in a brilliant crimson over the inner petals. The coronet that encircles the stamens and pistil is streaked with yellow, as represented by you.

I wish you could have witnessed with me a (watery) field of these royal lilies, where frequently we had to cut ourselves a passage for our canoes, their gigantic leaves forming footing for all kind of water-birds; prominent among them, the largest of all the ducks, the Anas moschata, or musk duck, and the strangely colored and long-toed Jacana (Parra Jacana).

The letter-press, in explanation of your plates, abounds in kind feelings towards me, for which I am truly thankful. There is no doubt that the plant had been seen by scientific travellers, previous to my discovering it in the river Berbice. They kept however their discovery a sealed book: and only after I had made known the existence of the Royal Water Lily to the civilized world, a number of claimants came forward! Had poor Thaddeus Haenke returned to his native country, or had he sent his description of the vegetable kingdom under the tropics to any other part of Europe than to Snain, as then constituted, it would not have devolved upon me to give an account of the "Victoria Regia." It requires perhaps a few words to explain the name. When I discovered the great water-lily in 1837, my travelling library contained only Sprengel's edition of Linné's System, the latest edition existing at that time (but having presented it to a friend before leaving Guiana I cannot quote the year.) The waterlily before me was certainly not described in that edition, or if so-in an erroneous manner. I considered myself authorized to use the privilege of a botanical discoverer, to give the name I liked to my new discovery. I was animated by the desire to prove my gratitude for the fact, that I, a foreigner by birth, had met so much encouragement in my scientific travels from the British government, and from the Geographical Society of London; hence the thought struck me, that this plant, the most eminent of my botanical researches in Guiana, should bear the name of her, upon whom the nation rested their hopes, namely, that of Her Royal Highness Princess Victoria. I alluded even in my description to the resemblance the water-lily bears to a gigantic rose, and the unison of the two colors of York and Lancaster in the Victoria Regia. On the arrival of my description and drawings. Her Majesty had just ascended he throne, and my friend Dr. Lindley having ascertained that the plant formed a new genus, a deputation of the Royal Geographical Society waited upon the Queen, requesting that she would graciously condescend that my wish of naming it after her should be complied with. A great paper-war has been carried on at home. about the name this wonderful plant bears in the scientific

world. I claim the right to it, although, according to botanical precepts my name does not stand as the author of it. It is for the first time that I have explained myself in the foregoing manner. The satisfaction of having brought the existence of this vegetable wonder to the knowledge of the civilized world, and that I conduced to give to thousands and thousands the pleasure of seeing it cultivated and in all its beauty, in Europe and the northern parts of America, is a sufficient satisfaction to me.

I must not omit to observe to you that His Grace the Duke of Devonshire possessed a water color painting of the Victoria Regia, executed in 1840, by Bartholomew, under my directions, exhibiting the flower and LEAF according to natural size. I saw it last at Chiswick in 1848, but I am unacquainted whether it is still in existence.

I have described the feelings that agitated me when I first saw this wonderful plant in 1837; and I can now assure you that they were revived in all their freshness when looking over the beautiful plates, full of artistic feeling, and the conceptions of a true admirer of nature's glorious productions, as represented in the work you have had the goodness to send to me.

Sir William Hooker has had the goodness to send to me some seeds of the Victoria Regia; strange to say, by the same opportunity that brought me your plates. I trust they may vegetate and take root in some of the fresh-water lagoons of this country.

I shall be happy to hear from you, and I beg you will command my services whenever you think they would be of advantage to you.

Believe me very truly your obliged

ROBERT H. SCHOMRUBGK.

FLORICULTURAL NOTICES.

CHINESE PRIMROSES.—Chinese Primroses are certainly amongst the most useful of winter-flowering plants for the

greenhouse and conservatory, both on account of their beauty and the variety of aspect which they present. We have already adverted to some very fine double-flowered sorts brought into notice by Messrs. F. &. A. Smith, of Dulwich; and we have been lately much gratified by the sight of a box of flowers from Messrs. Windebank & Kingsbury, Nurserymen of Southampton, who were, we learn, the raisers of the varieties grown by Messrs. Smith. Their strain of Primula is a remarkably fine one. The flowers are large, full, and frilled, and in color vary from white, through shades of pale tlesh-color, to blush of deepest hue, and from that again to the carmine-rose tint of M. Benary's carminata, and on through the ordinary deep rose tints to a very dark purple The pale ones especially are also remarkable for a large yellow star-like eye, sometimes measuring fully fiveeighths of an inch across, the flowers themselves being about two inches. Some others are splashed and flaked with rose on a white ground; and both pure white and flesh-tinted white as well as rose and rosy purple full double flowers were amongst those sent for inspection. With respect to these double-flowered sorts, which, with those of the Messrs. Smith, are decided acquisitions, Messrs. Windebank & Kingsbury state that after several years careful selection and hybridizing, they have succeeded in fixing the valuable property of producing double flowers from seed, from 10 to 20 per cent. of the seedlings coming double. In illustration of this they further state, that since 1862 they have produced unward of 200 double-flowered plants, all from seed.—(Gard. Chron.)

WINTER VARIEGATED PELARGONIUMS.—Variegated foliaged plants have become very fashionable of late years for summer and autumn decoration, but none surpass in beauty at this season of the year some of the Variegated Pelargoniums whether considered as ornamental plants for the greenhouse, conservatory, or for mixing with flowers in bouquets and vases. I have for some few years past cultivated the various classes of Zonal, Garland and Marbled Pelargoniums, both for exhibition and bedding purposes; and I find that some of the variegated section are beautiful objects during the winter season, while others which are worthy of admiration both in

and out of doors during the summer, are by no means ornamental now. Mrs. Pollock, Sunset, and others of the tricolor class appear to lose all their beauty during the winter months unless kept in a hothouse; while others are much more attractive now than in the summer. The most striking variety in my collection at the present time is Burning Bush, which I believe was raised by Mrs. Hally. One plant, which is about three years old, is exceedingly beautiful, every leaf on it having the deep pink circular band, which is now much brighter than it is in summer. Picturatum is the next best but does not approach in beauty to Burning Bush. (Gard. Chron.)

806. CAMELLIA GIABDINO SCHMITZ. Garden Hybrid.

Mastration Herticole, 1860, pl. 420.

A new and beautiful Italian variety, with imbricated flowers, of a delicate pale rose, or pink, the edges of the petals slightly notched, but possessing a good form and handsome outline. It flowers abundantly, is constant in form, and has a fine habit, with an elongated foliage, which is quite distinct. It is a fine acquisition. (Ill. Hort., Aug.)

807. HIBISCUS COOPERII Horl. SIR DANIEL COOPER'S HIBISCUS. (Malvaceæ.) New Holland.

A greenhouse plant; growing three flost high; with variegated foliage and scarlet flowers; appearing in summer; increased by outtings; grown in light rich soil. Ill. Hort., 1864, pl. 412.

A remarkable and magnificent species or variety of Hibiscus, with the showy flowers of the H. Sinensis, and narrow delicate foliage, mottled spotted and striped with white, crimson and green, in a more extensive variegation than any of the variegated leaved plants. This, added to its fine shrubby habit, and splendid large flowers, stamps it as one of the most brilliant plants introduced into our collections. We have seen nothing so distinct and unique, the young foliage being yellowish white, with stripes of green, and a distinct edging of scarlet. Our own specimen has not yet flowered, but we regard it, even without its flowers, as a grand acquisition. It will undoubtedly flourish well planted out in summer, as our own plant was, last season, and taken up and potted and wintered in a warm greenhouse. (Ill. Hort., Sept.)

807. ACER PSEUDO-PLATANUS VAR. LEOPOLDII Hol. LEO-POLD'S MAPLE. (Aceraceæ.) Garden Hybrid.

A hardy tree; with variegated foliage. Ill. Hort., 1864, pl. 411.

A new and very striking variety of the sycamore or English maple, found among a lot of seedlings, in the collection of M. Vervaene of Ledeberg Lez Gand. The leaves are richly colored with purple and green, the younger almost entirely crimson. It will be a rich acquisition among ornamental trees, and form a grand companion to the well-known purple leaved variety already in our gardens. (1U. Hort., Sept.)

General Aotices.

TAGETES PUMILA.-One of the best things which have come under my notice for some time is Tagetes pumila. I have seen nothing to surpass this annual when well managed; its neat habit, serrated foliage, profusion of bloom, pretty orange-colored flowers, and long duration, stamp it at once as one of the most useful bedding plants we have. Last season this was furnished by my seedsman, with a strong recommendation to try it. In May I planted out a row in order to give it a fair trial, and although I flatter myself that I have the gems of the bedding plants (and shall bed out this season nearly 40,000), Tagetes pumila was considered by all who saw it at Osberton during the past summer to be the second best thing grown there; the cream of the bedding being four large circular beds of Amaranthus melancholicus ruber, edged with Cloth of Gold pelargonium—these beds were the admiration of all. Both the Amaranthus and Cloth of Gold do well here; but I feel certain that the Amaranthus will be eclipsed by the introduction of Achyranthus Verschaffeltii into our flower garden. I look upon this plant as a great boon to the flower gardener. The management of Tagetes pumila is so simple and easy that any comments upon its culture would be superfluous; suffice it to say the foliage should be thinned, in order to check over luxuriant growth, and to permit the plants to throw up the blossoms more prominently.—(Gard. Chron.)

POTATOES FROM SEED.—Your correspondent J. C. N. should carefully wash his potato berries, spread the seed in them out to dry, and keep it in that state till March. He should then sow it in a gentle heat, and when the young plants are up, prick them off, until large enough to plant out in the end of May. The first year the tubers will be about the size of marbles; they must be taken up in the autumn and stored in the usual way; and in the next spring planted out. This is the way I went to work years

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ago under the direction of an older head than my own, and the result was 26 varieties of fine potatoes. It would have been better if your correspondent had carefully hybridized the sorts while in blossom.—(Gard. Chron.)

Peristerio or Dove-Flower.—This fine orchid comes from Panama, where it is known by the name of El Spirito Santo, or Holy Ghost flower, the centre of each blossom exhibiting a striking resemblance to a waxen dove. It is a very strong-growing species, with long oblong pseudo-bulbs, measuring from 12 or 18 inches in circumference, and with leaves rising from the crown from 3 to 4 feet in height, and as much as 6 inches in width. In spring, when the plants show signs of growth they should be repotted, picking off from the ball all bad soil and decayed or damaged roots, and using a well-drained pot of moderate size. Good fibrous peat should be used; and if it can be obtained, the peat from a wood where the leaves of various plants have naturally become decomposed is preferable. It should be used in small pieces, all the fine soil being shaken out so as to leave it full of fibre, and a few broken potsherds being then mixed with it.

When potted, the coldest end of the East India house is a suitable place for the plants. Water must be given sparingly at first, and must be kept away from the young growth. When it is required, the morning is the best time for supplying it. They will soon emit roots from the young growth, and then water may be increased accordingly. It is from these young shoots that the flower spikes are thrown up, and if the pseudo-bulbs are strong, there will generally be two spikes from a bulb.

By the time the new growths have formed bulbs, and are beginning to swell, the pot ought to be full of roots. I would then recommend that the plant should be removed to the hottest end of the East India house, and should receive abundance of water. The temperature being high, say from 90° to 95°, the bulbs will swell rapidly, and by the end of October or middle of November they ought to be fully grown. Then the plants must be allowed to go to rest gradually, and may be removed to the coldest end of the East India house, very little water being given through the winter, only just sufficiently to keep the bulbs from shrivelling.

When well grown, this is a very free flowering plant. I have exhibited it many times at the autumn shows. The greatest number of flower spikes I ever exhibited at one time on a plant was ten, and these were from four to five flet in height. The flowers are yellowish-white, with a peculiar fragrance, and they last for six weeks or more, if kept in a dryish atmosphere. August is the natural time of flowering.—(Gard. Chron.)

DESTROYING THE RED SPIDER.—The mixture used for the destruction of the red spider (and noticed by you in a former number), is not made from gum, but sago flour—a much cheaper compound than gum, as it costs in Liverpool only about 10 s. per cwt. Potato starch will do equally well, if sago flour is not obtainable. My starch was made in the following manner:—2 lbs. of sago flour were made into a thin paste, thickening it in the

same way as the laundry-maids do when making starch. This paste was then poured into three gallons of boiling water, and the mixture well stirred until it came to boiling again; it was then mixed with six gallons of cold water, and applied to the trees immediately by a syringe having a jointed nozzle. Thirty trees in my orchard-house were syringed with the effect shown on the leaf sent to the office of your journal.

It cannot be used too soon after being made. The cold water with which, it is mixed reduces the temperature to something like 100° F., which is quite safe, but if allowed to get cold it has not the same fluidity as at first. (Cot. Gard.)

NEW TOMATORS. Cook's Choice.—This is said to be a superior kind, compared with other varieties. The plants grow thrifty and are very fruitful, and ripen their fruit a fortnight after the Extra Early. The fruit is uniform in size and shape, never exceeding four inches across, and one and a half deep, and never less than one and three quarters inches. The form is what gardeners call the tomato-shape, perfectly round, flat above and convex below; color deep shining scarlet; skin very thin; seed few and small; inside all flesh, very melting, and buttery, sweet and finely flavored; the core is as melting as other parts, indeed it has no core; the juice is all absorbed in the flesh, and is very thick and elastic. The fruit is all free of deformities and irregularities, and does not rot so readily as other kinds do in wet weather and late autumn. They are much richer than other varieties.

Tiden's Seedling.—This is the name of a new sort raised by H. Tilden of Iowa. The vine is dwarf, averaging by the acre, not to exceed two feet in length. The fruit is fully exposed, and, when ripe, is of a bright red color, very large, perfectly smooth, and nearly solid. As a bearer it is remarkably prolific. Of the two generally the fruit will outweigh the vine.(?) For market purposes its equal does not exist. It handles well, and will keep three times as long, and stand three times the handling of any other variety known at least in Iowa. Last year an acre produced 500 bushels of fruit, netting \$1 per bushel. It comes into bearing about two weeks later than the early varieties.

A NATIONAL HERBARIUM.—Two years since, Prof. Asa Gray made the munificent offer to Harvard University of his valuable Herbarium and Library, upon condition that a suitable fire-proof building should be erected for their reception, and a fund invested for their adequate maintenance. The subject has been held in abeyance until recently, when Nathaniel Thayer, Esq., of Boston, offered to defray the cost, provided others raised the fund to meet the current expenses. Through the exertions of Rev. George B. Emerson this has been accomplished, and it is gratifying to know that this truly national collection, of the greatest importance to American Botany, has been disposed of agreeably to the wishes of Dr. Gray. Already many additions have been made to it by donations, and it bids fair to become one of the most extensive and important.

EURENIA UGNI.—This is grown at Lower Knowl, Kingsbridge, in the open air, and it is trained against a south wall, where it receives no protection. It is in fact quite hardy in Devonshire. In summer it is studded all over with beautiful fruit, of the size of a large black currant. It is my impression that the Eugenia will become an important fruit, and that it will be much valued and cultivated for its fruit alone. We have this season preserved four jars of the latter, and it is said by all who have tasted it that it is the richest and best preserve ever eaten—it has a delightful aromatic flavor, which partakes of something of that of the pine apple. Even when gathering the fruit a rich odor is left on the fingers. So freely does the plant bear that I have even seen bushes of it only one foot in height, with fruit on them.—(Gard. Chron.)

PRIMULA SINENSIS FIMBRIATA.—I have repeatedly bought seed of this, named from eminent nurserymen, the produce of which has been most uncertain. I have also sowed seed from the best flowers, with the same results. To be certain of possessing the best flowers it is absolutely necessary to have three or four times the number of young plants one wishes to keep. Insert the seed in a pan, and prick out each plant when it has pushed two rough leaves, into a 60 sized pot. In about two months the first flower generally appears, when I discard all that do not come up to what I am content with. The flower stalks are then picked off. Such as I desire to retain, and I continue to do this until the plants get strong, and I wish to have them in bloom. In this way I get a good collection of fimbriated flowering plants, that remain in bloom during the winter and spring months. The young plants seem to grow best in a frame with a north or northeast aspect, and with an abundance of air at all times, when the weather is not frosty.—(Gard. Chron.)

CLIMBING VARIETY OF THE DEVONIENSIS ROSE.—It may be interesting to know that this most beautiful of all light colored climbing roses is of the most vigorous and robust growth, making shoots from established plants, measuring 18 or 20 feet in length in one season. It is a most abundant early and late bloomer, flowering from May to November, very hardy, and retains its foliage all the year. The blossoms are six inches in diameter, and their shape is perfect. It is, in fact, one of the best light blored roses in cultivation.—(Gard. Chron.)

Gossip of the Month.

ISABELLA GRAPES IN MASSACHUSETTS.—A writer in the Boston Cultivator states that the time was when "the Isabella was quite a certain fruit" in Massachusetts. What exact time is meant we do not know. We have grown the Isabella since its first introduction around Boston, in 1826 or 28, and have never known it to fruit better than it has for the last few years. It

is about time this old idea about a change in our climate, in any material degree, was exploded. We think it was the Hon. J. C. Gray who contributed an article to the Proceedings of the Board of Agriculture, a few years ago, showing that no perceptible change has taken place for at least 100 years, beyond which period, perhaps, it is unnecessary to inquire. The Isabella never did and does not now ripen in Massachusetts only in favorable situations, and when such are given it, the grapes thoroughly mature three years out of five. Mr. J. V. Wellington, of Cambridgeport, who has repeatedly taken the premium for his fine specimens of this sort at the exhibitions of the Massachusetts Horticultural Society, always has a hand-some crop.

Sweet Potatoes—How to Grow them.—A North Carolina sweet potato-grower answers the question, "What is the matter with the sweet potatoes?" as follows:—Having had much experience in raising that valuable esculent, I will give it as my opinion that the two principal causes of failure were the deep tillage and probably the kind of manure used. Land for sweet potatoes should not be cultivated to a very great depth, and especially in northern latitudes, as the soil ceases to be a conductor of heat in proportion to the depth to which it is broken. Hence, as they require all the heat that can be given, the ground should not be broken to a very great depth, but kept stirred often while growing.

Much depends on the kind of manure used. The potato takes largely into its composition of potash; therefore manures containing it are most suitable. Hence wood ashes may be considered about the best manure. All lot manures should be mixed about half and half with ashes, the quality of each being improved. However, the best of all manures that I have ever tried is the dirt and cleanings from under houses, consisting largely of saltpetre. In a careful experiment with some ten or a dozen different kinds of manure, I found the scrapings from under houses best; fowl-yard manure, second; ashes and barn-yard manure mixed, next; ashes next; barn-yard manure next. It is not an unusual thing to hear it said that certain pieces of land are too rich for potatoes, especially barn-yards; but should you give the same a heavy coating of wood ashes, you will then find that it is not too rich. It is merely too rich in vegetable matter, but lacks the stash. Potatoes should always be planted in hills.

Horticultural Operations

FOR MAY.

FRUIT DEPARTMENT.

THE mild and more than usual fine weather of April, has greatly accelerated vegetation, and the season is now full two weeks in advance of the

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average. Peaches are already (22d) opening their blossoms, and other trees are remarkably forward. If no frosts occur, to injure the bloom, the season will be a fruitful one.

GRAPE VINES, in the grapery or greenhouse, will soon be in flower, and the temperature should be slightly increased, with little less ventilation, especially in dull weather. Discontinue syringing, for a time, but keep up a genial atmosphere. Attend to disbudding superfluous shoots, and tie in the laterals carefully and regularly, nipping off the ends of such as are in a forward state. Manure, dig, and rake the border. Vines, in cold houses, will soon be pushing vigorously, and will need good attention. Guard against cold drafts, and close the house early on cool evenings. See that the eyes break regularly and strong, and, as the weather becomes warmer, damp the house well down. Hardy vines should now be tied up to the trellis, and if not pruned properly it may be done now; a little bleeding will do no harm. Manure and dig the ground.

PEACE TREES, in the greenhouse or grapery, may be removed to the open air the last of the month, selecting a warm sheltered situation.

GRAFTING may be continued during the month.

Pausing should be continued at any leisure time, and trees washed with whale oil soap.

STRAWBERRY BEDS should now be well cleared of every weed, and if top-dressed with old compost, not very rich, all the better; do not dig the ground, but merely clean and stir the surface. New beds may be made any time during the month. Plant in rows, two to three feet apart, and a foot apart in the rows. Give the ground a good coat of manure before it is dug.

PLOWER DEPARTMENT.

From present appearances the season will be early, and the annual planting and bedding out time begin soon. Seeds of all things should be got in at once, and tender kinds brought forward in hot-beds or frames. Harden off in cold frames preparatory to planting out. In the houses there will be much to do. Winter flowering climbers of various kinds should be headed in, and plants intended for flowering at that season be headed in, repotted, &c. Remove all surplus plants to cold frames, or such as are somewhat hardy to a sheltered place. This will allow all specimen plants more room, without which their great beauty would soon be injured.

CAMELLIAS will now be making a vigorous growth, and will require syringing every day in good weather. See that the roots are also more freely watered, and one or two applications of manure water will do no harm, but rather benefit the plants. Shade from the hot sun.

Azaleas will now be in full bloom, and will require more water and a slight shade to keep them in beauty a long time; as the plants go out of bloom pick off the seed vessels, and clear away all decaying foliage.

PELARCONIUMS will now be in their perfection, and, if they have been well attended to, will amply repay all the labor. Shade now from the sun, in the middle of the day, but give an abundance of air. Turn the plants round often, regulate any straggling branches so as to make symmetrical

bushy plants one sheet of bloom. Young stock, intended for specimens, next season, may be encouraged by a shift into a larger pot. Water occasionally, with liquid manure.

FUCHSIAS will be growing rapidly, and, with a good moist temperature, and a slight shade, will soon make handsome specimens. Top the growing shoots, to get a thick, stocky habit.

CALADIUMS will now grow more vigorously; shift as soon as they require it, and shade from the hot sus. Water more liberally.

BESORIAS may have another shift now. Use coarse fibrous loam, leaf mould and sand, and shade in the middle of the day. Do not wet the foliage.

HEATHS AND EFACEIS may be planted out in the open ground. Break up the old balls.

CHRYSANTHEMUMS may have a shift if the plants are too pot bound, or they may be planted out in the open ground.

MONTHLY CARNATIONS, for next winter's flowering, should be planted out and headed down, to form bushy strong plants.

CACTUSES should be more freely watered, and occasionally syringed. Water with liquid guano occasionally.

CHINESE PRIMROSES should be removed to a cool frame, where they can be shaded from the hot sun. Sow seeds now, for a new stock.

Tuberoses, well started, may be shifted into larger pots, and plunged out in the open air.

Frans should be more freely watered, and, as they require it, shifted into larger pots.

LAURISTINUS should be headed in, and, if they require it, repotted.

CYCLAMENS should be removed to a cool frame, and have protection from the hot sun.

Acacias, and similar tall growing plants, should be headed in to make handsome specimens.

YUCCAS AND AGAVES, and similar plants, should be repotted, and placed in a warm situation, in the open air.

PLOWER GARDEN AND SHRUBBERY.

With the forward season and favorable weather, the lawn is already in order for cutting. Roll well, and cut while the dew is on. Clean, rake, and goll the walks. As the shrubs come into bloom, cut away any decaying or unsightly branches, which may have been overlooked,

GLADIOLUS, TIGER FLOWERS, &c., should be planted now.

DARLIAS may be set out all the month. Those planted early will flower in good season.

BEDDING PLANTS, of all kinds, may be set out this month.

ASTERS, BALSAMS, and similar annuals, raised in frames, may be planted out by the 10th or 13th.

Rosse, planted out early, will give an abundant bloom, all summer.

CLIMBERS, of all kinds, should have the superfluous wood cut out, and the stray shoots neatly tied up to the trellis, or other support.

STARE and tie Peronies, before they come into bloom.

Heropologywaatt amee tota

NEW WORK

ON THE

ORCHARD-HOUSE.

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FOR THE

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A MONTHLY JOURNAL

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Descriptions of all New Trees and Shrubs,

Pomological Gossip,

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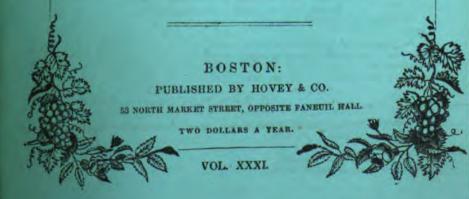
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No. CCCLXVII.
JULY, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMERICA.

BONORART MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFORD, WORCESTER, ROCHESTER, BUPPALO, CLEVELAND, WILMINGTON, STC. ETC.



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9. Obituary,

10. Horticultural Operations for July,

INSECTS.

The recent appearance of a new and beautiful work on the insect enemies of fruit and fruit trees, by Dr. Trimble,* at a time when their ravages have so sadly marred the apple orchards of many portions of our state, induces us to make the subject one of especial notice, that more vigorous measures may be taken to prevent a similar destruction another year.

There is no doubt about the fact, that insects are rapidly increasing, and are becoming formidable by their numbers, injuring, as with the canker worm, thousands of trees, and quite destroying the entire crop of fruit. The plum has almost gone out of cultivation, from the increase of the black knot and the curculio. The currants and gooseberries are annually stripped of their leaves, and the peach becomes the prey of the borer. An apple orchard, instead of being a source of profit, as it should be, is an item of expense. The leaves are eaten up, or, if these escape, the fruit is infested with a vile worm. Still, with all this yearly before us, with our fruit and many of our finest ornamental trees shorn of their foliage for half the summer, few or no active efforts are made to exterminate these pests of the garden, the orchard and the avenue.

It is gratifying, therefore, to find one who has long been cognizant of their depredations, watched them with a careful eye, and studied the sources from whence the mischief came, to add his experience to the knowledge we already have, that we may be enabled to battle more successfully with these foes of the fruit trees. Dr. Trimble is an enthusiast on this subject, and has long directed his attention to our insect enemies, and gives such a full account of them, and the various changes they undergo, that we can know at what stage we

A Treatise on the Insect Enemies of Fruit and Fruit Trees, with numerous illustrations, drawn from nature, by Holstein, under the immediate supervision of the author. By Isaac P. Trimble, M. D., Entomologist of the Agricultural Society of New Jersey, &c. The Curculio and Apple Moth. Pp. 150. New York, W. Wood & Co.; and A. Williams & Co., Boston, 1865.

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are likely to attack them best; for it is well known that in some of their various forms it is almost impossible to arrest their progress, while in others a very little labor will bring them under our control and render them comparatively harmless. Vigilance certainly is necessary, but the actual work, which some look upon as worth more than the crop, is slight, if only done at the right time.

The canker worm and tent caterpillar are familiar instances The former insect can only get up the tree by of this. crawling, for the female has no wings, notwithstanding many wise men have stated to the contrary in the newspapers of the day. Consequently she has only to be arrested in her ascent to prevent a single egg from being laid upon the branches, and this can be done by many modes, some of which are more certain than others. But of all these modes the PATENT ones are the most worthless. If the trees are tarred constantly, every day in November, and March or April, the work is done. Yet simple as this is how few think of it after the fruit is gathered; the trees are then left to themselves, and often not touched till the return of the harvest, if there is one. So with the tent caterpillar; one day's labor is sufficient to clear an orchard of an acre, if taken in time; but once allowed to get headway, and the trees partly devoured, it would take a week to destroy them, and then very imperfectly. Constant attention the cultivator must give to his trees; but really the labor is light and cheap compared with the value of the crop.

There is scarcely a plant, tree or fruit that we cultivate but what has its enemy, some of them few, like the pear, but others like the apple numerous enough. The larvæ of the May bug often destroy whole plantations of strawberries, and the borer burrows through the soft stems of the marrow squash. The slug devours the leaves of the rose in the open air, and the red spider does the same work in the house. With all these evidences of destruction why should not the cultivator be prepared at all times to contend with these pests, which despoil his beautiful plants, or destroy all hopes of an abundant crop, The tar pot, sulphur, potash, tobacco, and whale oil soap, should always be at hand, and if used in

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time, will amply repay all the labor necessary to render their application effectual.

At the last meeting of the Pomological Society at Rochester Judge Trimble was present, with his beautiful collection of drawings of various insects, and one evening was devoted to a kind of conversational meeting, called at the request of numerous members, when Dr. Trimble gave a brief statement of his labors for several years, with an explanation of the plates, and some account of the work he was about to publish. the first volume of which we have now under notice. alluded in strong language to the great neglect of cultivators in not destroying the various insects which prey upon vegetation, and attributed, very truly, the deficiency in our crops to this one cause, rather than the common belief of the decay of trees, change of climate, and all the variety of causes which yearly go the rounds of agricultural newspapers, till they are believed to be real facts, but which are mostly the crude notions of those who know little or nothing of the science of Many of the gentlemen present put various questions to the Doctor relative to the habits of various insects, which were answered, fully showing that he had been a close observer of their habits and transformations.

Dr. Trimble contemplates the issue of other volumes, and the present one is wholly devoted to the "Curculio and Apple Moth," two of our most destructive insects.

We have not room for the whole of the preface, but we copy the concluding portion:—

This work is without plan as a scientific book. Although treating of insects, it does not arrange them into orders, classes, or families, but only discusses a few species, chiefly in the order of their importance as enemies of fruit and fruit trees.

The object of the Author has been to make a book to meet the wants of the practical man, who has but little time for the study of any subject except his business, and least of all, a science involving, as Entomology does, hundreds or thousands of species. To make such a work intelligible illustrations addressed to the eye are a necessity. The fruit-grower should be enabled to identify his insect enemy positively when he sees it—there should be no guessing. The curculio and lady-bug, for instance, are both beetles; both are found upon the same trees; they will often fall down together when those trees are jarred. The one is our worst enemy, and the other one of our best friends. I have known people kill the friend and overlook the enemy.

I have been studying these enemies for many years. At first it was an investigation made necessary for the protection of my own crops; and that experience painfully taught me knowledge that I had not been able to find either in books or cabinets. The interest thus excited has been increased by the reading of such valuable works as those of Kirby and Spence, Huber, Latreille, Say, Harris, Fitch, and many others. From this reading and personal experience, I am satisfied that the interests of fruit-growers would be promoted if all the practical knowledge on this subject could be gathered into a separate work, and I have felt that it was a duty to make a beginning by contributing my portion towards a better understanding of this difficult subject.

When I assert that any individual can subdue his fruit enemies if he chooses, I speak from my own positive knowledge; and although I do not wish to be understood to say that the instructions contained in this book are the best, I do wish to be understood to say, that some general plan of treatment should be adopted. An individual who resolutely determines to do it can save his fruits; but if all his neighbors for miles round shall act with him in carrying out the same instructions, the work of each will be less even the first year, and all subsequent seasons will be comparatively nothing. How such instructions are to be generally disseminated or such associations to be formed, it is not for an author to determine.

The next portion of this work, both the text and plates of which are in an advanced stage of preparation, will treat of the various caterpillars injurious to fruit trees and grape vines. But the publication of an illustrated work like this is attended with so much expense that it is deemed advisable to await the verdict of the fruit-growing public before com-

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pleting another part. If the public show by the reception of the present volume that more is wanted, both author and publisher will be encouraged to bring it out at an early period.

The volume is in quarto form, and is illustrated by eleven plates, well executed and beautifully colored, giving the natural size, and all the various transformations of the insects, sufficient to enable the novice to detect them in every stage. With these are given all the various modes for their destruction, collected from all sources, with Dr. Trimble's views as to their efficacy, after numerous experiments made especially and carefully to test them. In addition we have a Diary of thirty or more pages, kept in 1864, and detailing a fund of information in regard to the value of birds, as an important aid in the destruction of these and other insects injurious to vegetation. This has not been guess work, but careful study, and an analysis of the stomachs of the several kinds of birds which are known to be the cultivators' best friends, and which he should do all in his power to encourage and introduce upon his grounds.

We hope to have space to refer to the work again. In the meantime we would advise every cultivator, who appreciates the importance of ridding our orchards and gardens of these pests, and seeing healthy trees with abundant foliage, without which they cannot thrive or produce perfect fruit, to read the volume, which, besides its elegant colored plates, will certainly lead to a better knowledge of the insect tribe, and prepare the way for a more vigorous attack upon them.

OBSERVATIONS ON RURAL TASTE.

BY D. W. LOTHBOP, WEST MEDFORD.

THE general lack of taste and neatness around country dwellings—mostly by those whose residence and vocation are there present—must strike every one whose mind is alive to

the beauties of nature and the resources of harmonizing art, as remarkable. And it would seem generally, that the practical farmers are the least capable of understanding or appreciating the refining influence of that good taste in rural affairs for which others show such aptitude and even enthusiasm. In viewing a beautiful landscape, either purely natural, or of the most composite and hidden blending of nature and art. their indifference is absolutely provoking. We are reminded of the sarcastic phrase of Cowper, "a candle in a skull." But then, there is a partial excuse, to say the least, for this. Tilling the soil is the farmer's vocation—the means by which he is too often obliged to struggle to live in a rough and homely way. Art is not his study, and often he thinks he cannot allow it a thought. If he has a few ornamental trees. they are usually set at hap-hazard. His great aim is to make the land profitable, and not to look well to the critic's eye. Hence a thrifty field of corn, or two or three tons of grass to the acre, excites in him more lively sensations than the most exquisite drapery of the landscape gardener. He has learned to calculate closely; his ideality is depressed; and he has none of the wild fancy or conception of the loose and bewitching law of disorder which enters landscape art. Like the multiplication table his mind'is square and mathematical. Rural embellishment is not profitable to him, and he therefore considers it wise to wait till he is able before he attempts to cultivate it. If such is the case, it is quite certain that the country would show but few traces of the hand of art if it depended upon the practical farmer.

And the resident mechanic or artisan, perpetually living in the sparse rural districts, does but little if any better, and pretty much for the same reasons. The truth is, there is much discontent both with farmers and mechanics in the country. Rural life is monotonous and dull, and they long to get into a city or large village, to see more of men and less of trees. It is in vain to tell them that country life is the most healthful and the happiest. They can't see it. And so the resident mechanics cannot be depended upon to embellish their homes any more than the practical farmers.

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Taste and art are the result of a high state of cultivation and intelligence; and these latter are mainly dependent upon frequent intercourse with more advanced minds. persons from the city will usually exhibit more taste, not only in their gardens, but in everything else, when located in the country. Absence from the country and confinement to the solid brick and stone of large cities, will give a keener relish for the beauties of nature when they are beheld, even with persons of but little refinement or taste. Upon these must dependence be generally placed for sustaining and advancing picturesque art, and perhaps of horticulture. With good taste many have wealth, and where they locate their example and influence are folt. The rough places in the country, within a radius of twenty miles of Boston, have within the last thirty years been most successfully invaded by the magic power of art. Rocks have suddenly sprung into tasty dwellings, disagreeable objects have been displaced, groves have been remodeled, and trees and shrubs of different climes have been introduced, to awaken new interest, and to add beauty to the landscape. In this respect the progress has been wonderful; but it has been mostly confined to retired and affluent gentlemen, or to persons doing business in the city, who return from the rattling pavement daily with renewed freshness for nature's loveliness.

Landscape art is the poetry of horticulture. It is not measured, exact and stiff, but flowing and graceful, with easy transitions from hue to hue and from object to object. To the reverent lover of nature.

"No tree in all the grove but has its charms."

Even the gray rocks are objects of interest, in their association with flowers and shrubbery, and to the contemplative and poetic mind tell their history.

"Nature is preacher, preaches to mankind, 'And bids dead matter aid us in our creed."

The picturesque art cannot be distinctly and practically defined, so that detailed rules may take the place of good judgment; for it cannot be said that there is only one way to give beauty to a landscape. There are various ways, in fact, differing more or less in excellence. Beauty is more

readily recognized then created. If we were to give a loose general definition of the modern art we should venture to say it was the harmony of discords, the law of disorder! Respectably obscure and undeniably paradoxical!

General hints, however, in landscaping may be given with propriety. Every distinct piece of ground should, of course, have its own specific embellishments, suited to its size, surface and locality as to environs. Its art should be insidious, not glaring, but natural. It should not appear as if the gardener adorned it, much less as if it attempted to be by the carpen-The more trees and grass, and the less lumber the bet-Ornamental ground should appear as much as possible as if nature had wrought up the scenery from her own ample Hence hedges are better then fences: and when materials. the latter are used, obviously they should not be the most conspicuous things in the garden. They should be sheltered with evergreens or shrubbery, to give a more subdued tone to the general appearance. Correspondences of trees and shrubs are now generally discarded as being two prim and formal, and not in harmony with land laid out into irregular shapes, as is now practised by the best modern gardeners. Stiffness and formality had become so fashionable in English landscaping and gardening-together with other incongruities—at the time of Pope, that the little gardener and poet of Twickenham thus satirized it. His pen is most always a pruning-knife.

"His gardens next your admiration call,
On every side you look, behold the wall!
No pleasing intricacies intervene,
No artful wildness to perplex the scene;
Grove nods at grove, each alley has a brother,
And half the platform just reflects the other;
The suffering eye inverted nature sees,
Trees cut to statues, statues thick as trees;
With here a fountain never to be played,
And there a summer-house that knows no shade."

COLOR OF HOUSES.—The notion is far from being eradicated, that a white house with green blinds is par excellence. But we may venture the assertion that it is not the opinion of those of cultivated taste. White has been very popular, yet it must yield to some other less glaring in the summer,

and one that will not make a man shiver in the winter. Besides, in the summer the contrast is rather too strong with the green blinds and the surrounding hue of nature. In the winter, white is of one piece with the snow-drift, and at all times has a cheap, whitewash appearance. A color more subdued is preferable. Brown, buff, salmon, drab, or some neutral tint, is far richer, less dazzling, and in the snowy months suggestive of warmth and comfort. Taste in the planting of trees and shrubs is usually designed for effect in the summer season. This is all very well; but by a liberal supply of the numerous hardy evergreens now well known, properly arranged, with a warm tint in the color of the dwelling, a more beautiful and richer scene may perhaps be presented in the depths of winter than in the summer-especially when the pines, spruces and hemlocks are drooping with a burden of snow. But a white house without evergreens makes a sorry appearance.

For every tree a man plants, and for every embellishment he makes in his rural precinct, he cannot expect therefor pecuniary profit; but if he gratifies an aspiration not entirely demoralized by the love of gain, he has his reward.

ORANGE CULTURE.

We have been surprised that the orange tree, with its superb foliage, its deliciously fragrant blossoms and its rich fruit, should have been so long neglected. To one who has seen the hundreds or thousands of magnificent trees at Versailles, some of them nearly 300 years old, it appears strange that no more attention is given to this fruit, if only for the beauty of the trees, as summer ornaments of the avenue, the terrace, the lawn, or even the flower garden. No Italian or French garden would be complete without its orange trees, and although we have not the climate of the former, where they can be grown in the open air, yet the protection which they require in our severe climate is so slight that they can be wintered with perfect safety, and very little cost. In

France the orange trees are generally kept in houses roofed over, with only light in front, where they remain in a dormant state till spring, when they are removed to their summer station to bloom and fruit, and again be returned to their winter quarters. Mr. R. Thompson, who gave an account of his visit to Versailles in 1847, states that many of the orange trees were thirty feet high, with stems thirty-nine inches in circumference. One tree had the inscription, "Semé in 1421." These are all wintered beneath the terrace of the palace, where of course there is only light in front.

Certainly a perfectly ripe orange will compare favorably with the peach, and if so much pains is taken to ripen the peach, which grows well in the open air, why should not the orange demand all the attention given to the former. With a little extra expense at first, the table could be supplied with delicious fruit up to the new year. No climate can be more favorable than ours in summer, and with good winter quarters the fruit could be produced much better than under the cooler skies of Great Britain. In summer, as well as winter, the trees need heat.

Mr. Rivers, who has done so much to extend orchard-house culture, now tells us how to have an abundance of oranges, and, as we know from long experience, what he says is perfectly correct, we copy his valuable advice, with the hope that gentlemen of wealth, who are lovers of delicious fruit, will introduce the culture of the orange with other fruits:—

On Christmas Day, 1864, I had the pleasure of adding to my dessert, Saint Michael's Tangierine, and Maltese Blood oranges, all from my orange-house, and also some fine fruit of the first and second from Covent Garden; the third sort I could not procure, as they had not arrived. Now came that most interesting period in after-dinner chit-chat—comparison. The Saint Michael's from "the Garden" were very fine fruit, but their flavor was flat, and not at all first-rate. The Tangierines, called in Covent Garden Mandarins, were juicy and good but not rich. The home-grown Saint Michael's were plump, crisp, and bursting with juice, their flavor much more aromatic than the foreign ones. The Tangierines from the

same house were rather over-ripe but very rich. The Maltese Blood, from trees growing alongside the two varieties above-mentioned, were scarcely ripe, but their flesh was of that deep red which has given them their disagreeable name, and peculiarly crisp, juicy, and aromatic. After due deliberation the family jury gravely decided that oranges of finer quality can be grown in England than any imported; their superiority consisting in that crispness and high aroma which imported oranges have not, probably from their being always gathered before they are fully ripe.

Home-grown oranges are no novelty, for Evelyn (I quote from memory) tells us in his Diary, that in February, 1660; he "ate as good China oranges as ever he ate in his life;" these were from his neighbor's orangery, and since then good home-grown oranges have been eaten by many persons. Still, oddly enough, no one has ever attempted to systematize their culture, owing probably to the cheapness and fine quality of those imported—a fact not to be disputed, for imported oranges in spring for two months are of great excellence. Still, this ought not to deter cultivators, for are not finer peaches often offered for sale in Covent Garden than are grown in private gardens? and the same with other kinds of fruit, yet they are not eaten with the zest that one feels for fruit from one's own garden, for have we not watched them and taken pleasure in their growth? So is it with orange culture, and as far as I have seen, there is no fruit culture calculated to give equal pleasure. One great source of satisfaction is the agreeable semi-tropical climate required to cultivate successfully oranges as fruit bearing trees.

There is no doubt but that the orange is a tropical tree, if judged by the perfection its fruit attains in the West Indian Islands and in South America, but it may be grown in England in great perfection in a climate we may for convenience sake call semi-tropical, i. e., a temperature averaging from 45° to 50° in winter, and with sun heat from 80° to 90° in summer. One great necessity is constant warmth to the roots of the tree.

Before I describe the method of culture which is so successful here. I may as well state that dessert oranges may be

grown in a cooler temperature, but they are then more slow in ripening, and are not rich and full flavored. Tangierine, Mandarin, and St. Michael's oranges, if grown in a conservatory or green-house will blossom some time in May or June. and their fruit will in most cases ripen the following summer. In a heated orange-house the trees blossom in February and ripen their fruit the following autumn, up to Christmas, the delicious little Tangierine leading the van. and generally ripening in October, just as the last peaches are As far as my experience has gone, this sort is often confounded with the Mandarin, apparently of the same race, but with larger and more flattened fruit; and if I may judge from the sorts I have received from Malta and China under that name, the tree has larger and thicker foliage, not so pointed as the Tangierine; the latter is more juicy than it and has a richer flavor. The method of cultivating dessert oranges here, is to a certain extent original, for I find none of the gardener's books mention it—in fact no horticultural writer seems to have thought it feasible except McIntosh. who recommends orange trees if cultivated for their fruit, to be trained on a trellis under glass after the manner of peach Thompson, in his Gardeners' Assistant, seems not to have thought of dessert orange culture; and so, as with orchard-house culture years ago, one has to advance without the experience of the past.

The orange-house here, in which many of the trees were lately in full bloom, and some of the St. Michael's with ripe fruit on them, is a span-roofed structure 60 feet by 12, heated by eight 4-inch hot-water pipes. A path is in the centre, and on each side is a raised border of slates, on which are placed the trees in pots. The slates form the roof of a shallow heated air-chamber, formed by placing iron bars across from a 4-inch brick wall along the side of the path to another wall running along the side of the house. The slates should have a lap of 1-inch, and be bedded down either with mortar or clay. Two 4-inch hot-water pipes are laid horizontally along the centre of each border close to the ground, and the slates placed on the iron bars so as to be about 3 inches from the pipes; the warm air is thus regularly diffused over the whole

under surface of the slates, making a warm floor of a temperature from 70° to 80° the year through. The width of this heated floor must depend upon the width of the house: if it be 12 feet wide the central path should be 8 feet wide, and each border 41 feet wide; if 14 feet wide, each border should be 51 feet wide. For houses of these widths two 4-inch pipes to heat the floor in each chamber, and two on each side next to the outer wall to heat the surface air of the house, will be sufficient. Span-roofed houses of the above widths are of sufficient dimensions for moderate-sized gardens, but for large establishments houses of 20 and 24 feet wide would form orange gardens of great beauty. In such large houses, if a broad central walk is made, and wide heated chambers for the trees on each side, sixteen 4-inch pipes would be required, four for each chamber and four on each side to heat the air of the house. In such large houses the trees may be planted out with excellent effect, but the borders must be heated with the same number of pipes, for root-heat is one of the necessaries of dessert orange culture—the sine qua non.

I have thus far thought it requisite to point out what may be done in this interesting department of fruit culture. will now in a few words state what is and what has been done here. Finding last summer that the roots of my trees became too dry on the bare warm slates, each pot was placed on a layer of cocoa-nut fibre, about three inches thick-old tan or light mould would do equally well-and in these little mounds the trees all the past season have continued to flourish.* It is indeed quite refreshing to visit the house, so vivid is the green of their young leaves, so fragrant their flow-The root-heat has never been discontinued, but about the end of May the water was turned off the pipes that heat the air of the house, as the weather was hot, and not turned on again till the end of July, when extra heat was required to ripen the fruit. Much, however, must depend on the nature of the summer: if cloudy and wet, root-heat and surface-heat will both be required all the year: if warm, surfaceheat may be discontinued for some weeks, but root-heat

^{*} This has been found preferable to covering the heated floor entirely, as the bare slates radiate much heat in severe weather.

never. The great charm of this orange-ripening climate is its refreshing airy warmth, for in sunny weather abundance of air is given from low ventilators on each side of the house.

As usual when much pleasure is derived from any peculiar mode of culture, much care is required. The leaves are apt to be affected with a black powdery substance, probably some species of fungus; this must be washed off with a sponge and warm water. Again, that most intolerable pest, scale, is always on the qui vive, and so rapid in propagation, that as a young German who is here said the other day, "they are daughters and grandmothers all in one day." There are many efficacious nostrums to kill this persevering enemy, but after trying all, we have come to the conclusion that syringing the trees once a day in the winter—avoiding the blossoms—and twice a day in the summer is a preventive; and carefully watching the trees and picking off every scale as soon as it can be seen is a sure cure. A sharp-eyed boy soon becomes very sharp in finding scale, and if kept under they give but little trouble; the constant syringing seems to make them feeble and unhappy.

With regard to the varieties of oranges to be cultivated, we have yet much to learn. There are in the Azores some 50 or 60 sorts cultivated, many of them said to be very distinct in flavor, and of great excellence. It seems to me a very interesting feature, that of placing on our tables oranges of our own growth, varying in color, size, and flavor. At present the three sorts of which we have no doubt are the Tangierine, the St. Michael's, and the Maltese Blood, which when gathered dead-ripe is found to be full of its delicious juice. This kind requires the warmest part of the orange-house, as it is slow in ripening; but if the summer be warm and sunny, it will ripen about Christmas. A well-arranged orange-house will give ripe fruit from early in October till June, commencing with the Tangierine, and endings with the Maltese, reminding one of the length of time grapes may be gathered from one vinery.

Although I have confined myself to describing how dessert oranges should be cultivated in a house devoted to them, I

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must not omit saying that in a heated vinery or pinery they may be grown successfully.

What I wish to convey is the beauty and interest attached to an orange-house, where the trees are kept in fine health. It is indeed such a source of pleasure, that I feel I can give but a faint idea of it; it is perpetual summer, a realization of the gardens of the Hesperides. The trees are evergreen, almost ever-blooming, and are most certainly an ever-giving source of delight to a mind alive to the beauties of nature.

POMOLOGICAL GOSSIP.

STRAWBERRIES.—This fruit, just now, as we write, is in full perfection, at least ten days earlier than last year, and we think earlier than any year for a long period. We began gathering the Jenny Lind and the Boston Pine on the 7th of June, and now, the 17th, the Hovey and La Constante are in abundance, though the latter is not so generally ripe. The show at the Massachusetts Horticultural Society, on the 17th of the month, was the best by far ever made by the Society, as regards the quantity of specimens and number of exhibitors, and some of the sorts were quite up to any former year. The varieties comprised Hovey's Seedling, Brighton Pine, Jenny Lind, Wilson (one exhibitor only), Triumph de Gand, Oscar, Marguerite, Cremont, Napoleon III., La Constante, Lenning's White, Prince Frederick William, Empress Eugenie, Emma, Green Prolific, and the new sorts, Buffalo Seedling, French's Seedling, and Russell's Prolific. The latter from three or four exhibitors.

Notwithstanding what has been said in regard to the Russell's Prolific, as being large, remarkably fine, &c., cultivators were greatly disappointed. It is certainly a very good bearer, but as regards color it is as dark as the Wilson, nearly or quite as sour, and remarkably coarse in appearance, with high ridges formed by the depression of the seeds. It is also soft, does not hull easily, and will not bear carriage.

The Buffalo Seedling is identical in appearance with the

Russell, and we are not at all surprised that the western pomologists have pronounced them the same. No two berries could be more alike, but it is stated the foliage is quite distinct, and that they are not the same. Our own plants, just planted out, do not enable us to form a decided opinion on this question, but they seem identical. As regards quality and appearance it cannot be ranked any higher than the Russell.

French's Seedling is a fair-sized berry, but so pale in color, and soft in texture, as to render it decidedly objectionable as a market fruit. It is not so early as Jenny Lind by several days.

The Agriculturist has only fruited in pots, and it would be unfair to judge of its merits now. As regards flavor, however, our own specimens did not give us a high opinion of its excellence.

La Constante still takes the lead of all the newer berries, native or foreign, which have been added to our collections the last few years. A report of the prizes awarded will be found in another page.

GEN. GRANT STRAWBERRY.—A new variety, under this name, was exhibited in New York at the Agriculturist office, and also at the Farmers' Club, Queens County, Long Island, Strawberry Show. The Committee of the Club report "specimens of a new seedling (Gen. Grant) raised by Wm. A. Burgess, Glen Cove, were exhibited, that had been picked 76 hours, rode 30 miles in a wagon, and when shown were firm and in good order. Some of the Committee who have seen them in bearing, report them a very prolific bearer." Mr. Halleck, who exhibited the berries, thinks these qualities certainly desirable for a market berry. The Gen. Grant is a vigorous grower, prolific bearer, fine flavor, and very firm flesh.

Western Fruit.—The Fruit Growers' Society, Western New York, held its summer session at Rochester, on the 21st, and was well attended. The exhibition of fruits was confined to strawberries and cherries, the former affording fine specimens, in consequence of the warm and moist season. A report of the meeting will be found on another page.

BOUGAINVILLEA SPECIOSA.

This new and elegant running plant is yet but little known to our cultivators, and it has not, to our knowledge, flowered in but one collection in the country. A year ago Mrs. T. W. Ward of Canton, Mass., sent us some cut specimens of the blooms, and, although we had seen a colored plate of it, and read glowing accounts of its great beauty, we hardly expected to find it so attractive.

Many years ago a very pretty figure of it appeared in a French work, describing the rare plants in the collection of the Jardin des Plants of Paris; but we never heard anything of it, and supposed it had been lost, until the English periodicals gave an account of its blooming at Swyncombe, as noticed in a previous volume.

Doubting not it will soon be generally introduced into every conservatory, we copy the following notice of its treatment, as it has been said to require particular care to bloom it well. It appears, however, that there is no secret about it, only that common to all fine plants, viz., to know what it requires, and to supply these requirements. It appears only necessary to grow it strong in the summer season, and ripen off the wood well to secure plenty of flowers. Just the same treatment given to the magnificent Bignonia venusta will enable the cultivator to have an abundance of its rich mauve-colored bracts or blossoms, throughout the latter part of winter.

Mr. Clark, Mrs. Ward's excellent gardener, informs us he found no trouble in blooming it, and that it is as free to grow, and easy to flower, as any plant. As a conservatory climber it is, undoubtedly, for effect, one of the finest yet introduced.

The successful manner in which Bougainvillea speciosa was grown at Swyncombe, under circumstances which seemed to indicate that strong heat, and especially strong bottomheat, was essential to induce it to produce its inflorescence, has no doubt led to the conclusion, on the part of many cultivators, that some such application of heat is necessary to

secure those glorious masses of floral bracts which place this plant in the front rank amongst ornamental creepers. We were agreeably surprised a few days ago to find this same Bougainvillea blossoming at Cliveden, under circumstances which prove, at least, that a command of heat is not, as was supposed, the clue to its successful treatment. Mr. Fleming's plant was indeed growing in a greenhouse conservatory, without any bottom-heat whatever, and yet its branches were most charmingly draped in mauve color, as those who saw the specimen shown by him at the last Regent's Park Show can bear witness. How Mr. Fleming's plant has been treated he shall himself tell, as he has been so obliging as to send us the particulars.

"A few years ago the readers of the Gardeners' Chronicle were startled by a glowing leader on the beauties of Bougainvillea speciosa. Many I believe up to the present day consider the picture there given to be overdrawn, but those who have been fortunate enough to see the plant under favorable circumstances, will agree with me that not only is that account far exceeded by the real beauties of the plant, but that we ought to be grateful to Dr. Lindley for bringing its merits so prominently before the public. The treatment that had been given to the plant there noticed, and the great heat, both top and bottom, that had been afforded it, have, there is no doubt, deterred many from attempting to cultivate the plant, because they were not possessed of a stove with the command of heat there indicated. It is to encourage such persons to give it a trial that these remarks are made.

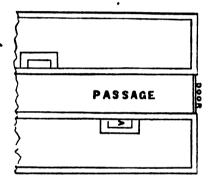
I have found the Bougainvillea to grow and bloom magnificently in a temperate house, where little more than the frost is kept out in winter, and where no fire is used in summer, and also without the slightest degree of bottom-heat, the only difference being that it blooms much better. It will, I am convinced, prove to be one of our best warm conservatory plants, for when it once gets old and strong in the stem it will carry a great length of its gorgeous mauve-colored branches. Even in high-roofed conservatories, where the cold sometimes gets in at the top, I should not fear to grow it, as we have found it uninjured by 8° of frost. It

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should not, however, be overlooked that when making its growth the house should be kept as close as the health of its other occupants will permit. It will be, perhaps, most easy to explain the treatment given by adding a section plan of the house, (Fig. 9.)

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The small spaces (A) are one foot wide and two feet long on each side of the pathway, at intervals of two feet. The house is a span-roof, and the plant is trained over the path alone, this not interfering with the growth of other plants on the stages. The plan I recommend is adding great interest to a span-roofed house. Some of our climbers are much more beautiful than many people imagine, but they rarely have the charm of fully developing their beauties, under the confining system so frequently applied.



9. SECTION PLAN OF THE HOUSE.

The soil in the space was prepared, but below the brick-case the roots were allowed to run all over the bed beneath the stage, which is composed of brick rubbish and the soil that accidentally got mixed with this in the alterations. This has no doubt a great deal to do with the success, because it provides a hard surface in the portions of brick for the roots to adhere to, and carries off quickly the repeated doses of weak manure water, besides facilitating the ripening and drying it well off in the cold winter months. Many persons encourage the growth of gross suckers, which the plant will invariably throw up when making its growth; but I find these to interfere with a good display of color. While the growth is kept to the old stem all the vigor is thrown into the

top—by far the best treatment for nearly all climbers. Upon referring to the section of the house it will be seen that a great portion of the plant is always likely to face the glass on the top, and that is where the main portion of the color is; but to avoid that we are planting several by the columns of a high conservatory, to allow the branches to fall down, which they will do, and form wreaths ten feet long.

The Bougainvillea is a native of the high grounds of South Mexico, but it is almost naturalized in Sicily and around Naples, where it grows in great abundance against walls and cottages, though it rarely shows its colors so finely as it does in our houses, the sun frequently turning the mauve bracts to a dirty white, which also happens with us if not carefully shaded. I may add that it is a most useful plant to cut from for in-door decoration, standing a long time in the rooms, and retaining its bright color there. It also travels well if carefully packed; and will continue fully two months in bloom in a temperate house.

FLORICULTURAL NOTICES.

LATHYRUS TUBEROSUS.—This is a very pretty perennial variety of the pea, with slender twining stems, and clusters of rosy tinted blossoms, which appear in great profusion all over the plant. The roots are tuberous, like the Apios tuberosa. It is a very fine acquisition.

THE STRIPED VERBENAS.—The Italian striped verbenas, so called, are very pretty additions to our collections. The trusses of bloom are not so large as many others, nor the flowers so large, round and good shape, but in the variety of their pencilling they are different from any of the French or European sorts, and make up in their tints, what they lose in size and form.

815. Aloca'sia Lo'wii var. picta. Mr. Low's Variegated Alocasia. (Aroideæ.) Borneo.

A stove plant; growing two fact high; with variegated foliage; grown in light peaty soil; increased by division of the roots. Bot. Mag., 1865, pl. 5497.

A very high colored variety of the fine A. Lowii, having the

same habit, but with the variegation more distinct, and the brown purple of the under side of the leaves brighter. It was imported from Borneo by Messrs. Low & Co., and is well worthy a place in every collection of rare plants. (Bot. Mag., March.)

816. Læ'lia præstans Reechen. Admirable Lælia. (Orchideæ.) Brazil.

An orchideous plant; growing best on a block of wood, near the glass. Bot. Mag., 1865, pl. 5498.

A rare and most beautiful species, with the richest mauve colored flowers, the tip almost blood purple, showing a grand contrast. It is from Brazil, and is yet rare in English collections. (Bot. Mag., March.)

817. IBE'SINE HERBSTII Hook. Mr. HERBST'S IRESINE. (Amarantaceæ.) Brazil.

A hothouse plant; growing eighteen inches high; with crimson foliage; grown in light rich soil; increased by cuttings. Bot. Mag., 1965, pl. 5499.

This is the same plant we described in our last volume, as Achryanthus, under which name it was figured in the Belgian journals. It seems, however, that the plant was found thirty years ago, and dried specimens sent to Dr. Hooker, though it has been quite overlooked by cultivators; but it was at last introduced by Mr. Herbst, near London, from the River Plate, South Brazil.

In general aspect it resembles the beautiful Coleus Verschaffeltii, but it is richer and deeper in color, finer in habit, and as free a grower as that plant. As it will be likely to prove a first rate bedding plant, and be sought for by all who like rich, deep colored foliage, we copy the following account of it by Mr. Herbst, from the Floral Magazine:—

"It attains a height of from twelve to eighteen inches, and is without any trouble grown into a perfect specimen of the most globular form, as it produces a branch from the axil of every leaf. In a house too warm and close it no doubt grows taller, but even the stopping of the terminal shoot would make it branch very easily. The stem and branches are of a most beautiful, almost transparent carmine, while the leaf itself, strongly bilobed, is of a purplish crimson underneath,

dark maroon on its upper side, with its many broad ribs of a very prominent carmine. There is not a green spot on the whole plant, and whether placed in the shade or in the most brilliant sunshine, it produces a most admirable contrast with plants of a lighter color. It has neither the gloomy appearance of the Perilla nor the woolly leaf of the Coleus, and is by no means so susceptible of cold and dampness combined as this latter plant. Another advantage it has is, that it does not flower either out-of-doors or in a warm greenhouse, where I have introduced several strong plants, on purpose to induce it to flower, but without success."

818. AGLAONE'MA MARANTÆFOLIUM, VAB. FOLJIS MACULATIS.
VARIEGATED MARANTA-LEAVED AGLAONEMA. (Aroidess.)
Malay Islands.

A greenhouse plant; growing eighteen inches high; with whitish flowers; appearing in winter; grown in loam and leaf mould; increased by division of the roots. Bot. Mag., 1865, pl. 5500.

A calla-like plant, with narrower and more tapering leaves, mottled with white and dark green. The flowers are small, and resemble a calla before the blossoms are much expanded. As it is undoubtably of easy culture it will be a pretty addition to collections, especially for summer decoration. (Bot. Mag., June.)

819. DIPLADENIA NOBILIS Ch. Morren. Noble Dipladenia. (Apocynacese.) Brazil.

A hothouse plant; growing four feet high; with flesh colored flowers; appearing in winter; grown in light rich soil; increased by cuttings. Illus. Horticole, 1865, pl. 425.

This is an old but charming plant, introduced many years ago, but lost to collections; it has now been reintroduced by M. Verschaffelt of Gand, in whose collection it flowered in June last. It is a slender climber, with the stems loaded with large trumpet-shaped flowers of the most exquisite blush or pink tinge. The roots are tuberous, and grow naturally in a deep rich soil. It has always been considered hard to cultivate; but there is no difficulty in this, if the plants are kept growing well, and after blooming allowed to dry off, in imitation of their native clime. The roots should be dried off like any tuber or bulb. When the time for growing begins, they require plenty of water, grow rapidly, and bloom freely. (Ill. Hort., Jan.)

820. Camellia Planipetala. Garden Hybrid.

A greenhouse plant; with white flowers. Ill. Hort., 1865, pl. 426.

A beautiful variety, with ample flowers, perfect petals, clear white, with a slight sulphur tint. It flowers abundantly and freely, has a beautiful foliage and elegant habit, and is undoubtedly one of the best of its class. (Ill. Hort., Jan.)

821. Robinia Pseudacacia, var. Decaisneana. Decaisne's Robinia. (Fabaceæ.) Garden Hybrid.

A hardy tree; growing twenty feet high; with pink flowers; appearing in spring; increased by grafting. Ill. Hort., 1865, pl. 427.

This is the beautiful variety we noticed in a recent number. It was found in a bed of seedlings in the nurseries of M. Vielville, Jr., at Manosque, France. In growth and habit it is similar to the parent, the common Robinia, but the clusters of flowers are of the most delicate pink. It will be a beautiful addition to our gardens. (Ill. Hort., Feb.)

822. Azalea indica, var. Grand Duchesse de Bade Versch. Garden Hybrid.

A greenhouse plant; with deep red flowers. Ill. Hort., 1855, pl. 428.

A very showy variety. The flowers are semi-double, of the largest size, measuring three inches in diameter, very bright red, and spotted with crimson. The exterior lobes are largely developed, and the stamens are transformed into petals. It is a seedling of M. Verschaffelt's, and will make a brilliant and showy plant. (Ill. Hort., Feb.)

823. CYPRIPEDIUM VEITCHIANUM *Herb*. Mr. VEITCH'S CYPRIPEDIUM. (Orchideæ.) Java.

A hothouse plant; growing a foot high; with spotted flowers; increased by division of the root; cultivated is sandy peat and leaf mould. Ill. Hort., 1865, pl. 429.

A very beautiful species of this handsome genus, introduced from Java by Messrs. Veitch. The foliage is finely spotted, and the flowers, which are large, are elegantly colored, the sepals being spotted and striped, and the lip of a rich brown purple. It is still rare. (Ill. Hort., Feb.)

824. VERSCHAFFELTIA SPLENDIDA Herm. Wendl. SPLENDID VERSCHAFFELTIA. (Palmaceæ.) Africa.

A stove plant; growing ten feet high. Iil. Hort., 1865, pl. 430.

A magnificent new palm, introduced by M. Verschaffelt, and named in honor of him. The leaves are nearly three feet long, and more than two feet wide, entire, of the deepest green, with orange colored midribs, quite unique, and distinct from all other palms. It requires the heat of the stove, and is a grand acquisition. (Ill. Hort., March.)

825. BRYONOPSIS LAICNIOSA, VAR. ERYTHROCARPA. RED FRUITED LASCINIATE BRYONOPSIS. (Cucurbitaceæ.) Himalaya.

An annual plant; growing six feet high; with scarlet fruit; increased by seeds; grown in good garden soil. Ill. Hort., 1665, pl. 431.

A very pretty cucurbitaceous plant, with small, palmate foliage, and conspicuous scarlet fruit, which clothe the slender stems at the axil of every leaf. M. Naudin of Paris, who has given an account of it, states that the seeds were received in 1862, at the Museum d'Historie Naturelle. It proves to be an annual, flowering early and fruiting abundantly. Two plants, cultivated in pots, against a wall, produced hundreds of fruits. These fruits are round, of the size of a cherry, often seven or eight together, deep green, mottled with white, changing to bright red when fully ripe. It has the habit of a Troppolum, and the effect of the berries is charming. It is easily raised from seeds. (Ill. Hort., March.)

826. ABUTILON VEXILLARIUM Ed. Mooren. STANDARD ABUTILON. (Malvacese.) Central America.

A greenhouse plant; growing 2 feet high; with red and yellow flowers; appearing in winter; increased by cuttings; grown in light rich soil. Iii. Hort., 1835, pl. 432.

A new and very distinct species, with flowers smaller than A. striatum, the calyx scarlet, the corolla yellow, and the stigma brown. It flowers freely, and is quite unique in its shape. It is believed to have been raised from seeds received from Central America. Flowers solitary at the axils of the leaf, hanging gracefully amid the rather small foliage. It will be a very pretty addition to collections. (Ill. Hort., March.)

Societies.

FRUIT GROWERS' OF WESTERN NEW YORK.

This society held its annual meeting at Rochester on the 21st. The meeting was well attended, and Mr. C. Downing and Dr. Trimble were present. The discussions are stated to have been interesting and animated. We copy the following report of the minutes of the discussion on strawberries, showing the progress of the Rochester cultivators in the growth of this fruit:—

Best Strawberries for Family Use.

The morning session was occupied with the consideration of the best varieties of the strawberry for family use. Dr. Trimble said that in the vicinity of New York the Wilson was more widely cultivated than any other sort, although largely intended for marketing. The Triomphe de Gand had not succeeded well, and its culture was nearly discontinued. The new "Agriculturist" had not been sufficiently tried to establish its character, but it gave high promise, being fine in quality and a strong grower. He objected to the name "Agriculturist," as applied to it, as it was originated by careful cross fertilization by Seth Boyden, whose name he thought it should bear—but who had now some new sorts that he considered superior—some one of which would probably receive his name.

H. E. Hooker of Rochester, thought we should have to fall back on some of the old varieties. Among the earlier varieties he regarded none better than Jenny Lind; the Hooker had rather improved, and was esteemed the best for its flavor. In the Russell he was somewhat disappointed—being too tender in flesh to carry to market, and very nearly resembling Mc-Avoy's Superior, both of which needed fertilization to form perfect berries. The Buffalo Seedling had been pronounced indentical with the McAvoy's Superior.

T. C. Maxwell said that the three best sorts for family use were Triomphe de Gand, Russell and Wilson's Albany, provided the latter were fully ripe. The Russell is a pistillate, and bears well when fertilized with Wilson.

Chas. Downing thought the Triomphe de Gand best of all for family use. It is not so productive as some others, but he preferred one quart of good berries to three quarts of bad ones. He liked the Jenny Lind better than the Early Scarlet. He stated that the Crimson Favor, a new variety, he thought would prove very large, very early, and of fine flavor, but was not productive.

H. T. Brooks of Wyoming county regards quality as the main point for home consumption—that it was cheaper to raise good strawberries than to buy sugar. If his object was merely to "fill up," he would raise pumpkins for this purpose—but as he preferred fine quality—he would raise only the best—be the same more or less.

J. Crane of Lockport preferred Burr's New Pine, but Chas. Downing objected on account of its inferior size, as we do not wish to spend a great deal of time in picking.

President Barry said a very prominent point should be earliness. So important was this regarded, that the difference of a few days would more than double the price. He therefore particularly esteemed the Jenny Lind and Early Scarlet—the former is the sweeter, but less productive than the Scarlet.

Bronson of Geneva, like some others, had been somewhat disappointed in the Russell, it proves to be a prodigious bearer, but is soft and hiable to rot. This may, however, be owing, to the present season, to the warm and wet weather. He found it better in quality than McAvoy's Superior, but not sufficiently firm to handle well, and it always requires fertilizing by such good fertilizers as Wilson's or Austin's Seedling. He had just experimented imperfectly with the "Agriculturist," and although not prepared to speak confidently of its merits, thought that it promised to prove valuable. Chas. Downing also thought highly of the Agriculturist.

C. L. Hoag said the Filmore had not succeeded well with him, and that he had discontinued its cultivation and ploughed up his plantation of it.

Chas. Downing said that in comparing the Russell with the McAvoy's Superior, it should be borne in mind that there were two varieties disseminated as McAvoy's Superior—the spurious being light red—the genuine dark red. He said the genuine was the same as the Buffalo Seedling.

A ballot was taken for the best 6 varieties for family use, and resulted in the following vote—those receiving the highest number would, of course, be understood as being the more general favorites in Western New York—33 votes being given in all:

Triomphe de Gand, 30 votes.

Early Scarlet, 26 votes.

Russell and Wilson, each 23 votes.

Hooker, 22 votes.

Burr's New Pine, 12 votes.

Hovey's Seedling, 8 votes.

Victoria and Brighton Pine, each 5 votes.

Jenny Lind, 4 votes.

Crimson Cone, for Canning, 3 votes.

Agriculturist, 3 votes.

Buffalo, Austin, and Longworth, each 2 votes.

Red Alpine, White Alpine, Cutter's Seedling, Jenny's Seedling, Genesee, and La Constante, each 1 vote.

BELMONT FARMERS' CLUB.

This flourishing association held its seventh annual Strawberry Show on the 20th of June. The season has been favorable and the exhibition was large and very good. The day was a little late for some of the best specimens of several kinds, still the show was every way worthy the skill of the Belmont cultivators.

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In addition to strawberries, liberal prizes were offered for bouquets and pot plants, and there was a fine display of the former, which served to set off the show of fruit, arranged as they were along the centre of the two long tables, either side being filled with several hundred or so baskets of strawberries, containing from two to four quarts each. The main kinds were Hovey's Seedling and Brighton Pine as usual, but there were more of the Triomphe de Gand and La Constante than last year, with a few of the Austin.

The following is the award of prizes:-

For the best basket of strawberries, containing not less than 4 quarts of any one variety, to W. H. Locke, for La Constante, a Silver Cup valued at \$25.

For the next best basket of strawberries, containing not less than 4 quarts of any one variety, to J. O. Wellington, for Triomphe de Gand, a piece of Silver, valued at \$15

For the best basket of Hovey's Seedling, not less than 3 quarts, to A. Simpson, \$10.

For the next best, to J. O. Wellington, \$5.

For the next best, to M. Patterson, \$3.

For the best basket of Brighton Pines, not less than 3 quarts, to J. S. Crosby, \$10.

For the next best, to D Chenery, \$5.

For the best basket of Triomphe de Gand, not less than 3 quarts, to J. O. Wellington, \$10

For the next best, to D. Chenery, \$5.

For the best two quarts of any other variety than those above named, to C. W. Winn, 84.

For the next best, to C. W. Winn, \$3.

For the next best, to W. J. Underwood, \$2.

For the best collection of five varieties, one quart each, to J. O. Wellington, \$10.

For the next best, to Hovey & Co.. \$6.

The competition was very close between Hovey's Seedling and La Constante. Mr. J. Crosby, who took the prize for the Hovey, had a magnificent basket, as did Mr. Wellington, who carried off four prizes, sustaining his reputation as a strawberry grower.

The day was fine, and the attendance of visitors large. Music was furnished by the Germania band, and the occasion will be recollected with pleasure by all who were fortunate to be present.

Massachusetts Forticultural Society.

OPENING OF THE HALL.—The opening exhibition of the season took place on Saturday, May 27. The show was very good, though the number of exhibitors was limited. Cut flowers were very fine.

From Jona. French, a variety of plants, with small but well-grown specimens. From Hovey & Co., a collection of plants, including the fine Pandanus variegatus, Yucca aloeifolia variegata, Tetratheca verticillata, &c., also six fine heaths, and the following azaleas: A. Mad. Miellez, Model, Gledstanesii, Brilliant, Osborni, and crispiflora; six large flowered, and six Fancy pelargoniums. From H. H. Hunnewell, six fine pelargoniums and six fuchsias. Cut flowers came from F. Parkman, Hovey & Co., J. Nugent, J. E. Westgate, J. McTear, and others. James Barrett sent 60 species of native plants.

AWARD OF PREMIUMS.

PLANTS.—For the best collection, to Jonathan French, \$15.

For the next best, to Hovey & Co., \$12.

AZALEAS.—For the best six, to Hovey & Co., \$10.

PELARGONIUMS.—For the best 6 large flowered, to H. H. Hunnewell, \$8.

For the next best, to Hovey & Co., \$6.

For the best Fancy do., to Hovey & Co., \$8.

Specimen.—For the best, to Hovey & Co., \$4.

CUT FLOWERS.—For the best, to F. Parkman, \$6.

For the next best, to J. Nugent, \$5.

For the next best, to J. E. Westgate, \$4.

For the next best, to J. McTear, \$3.

GRATUITIES.—To H. H. Hunnewell, for rhododendrons, \$5.

To H. H. Hunnewell, for fuchsias, \$5.

To James Barrett, for native plants, \$5.

Premiums and gratuities were also awarded for baskets of flowers and various contributions.

June 3. An adjourned meeting of the Society was held to-day,—the President in the chair.

Numerous members were proposed, and seventeen elected.

Exhibited. Floweas: From H. H. Hunnewell, Hovey & Co., and R. Oldreive, fine collections of rhododendrons and azaleas. Among Mr. Hunnewell's were several deep colored varieties. Cut flowers, in variety, were shown by various exhibitors, and some superb fuchsias, by J. W. Brooks, Esq., the best, we think, ever shown in the Hall, and gained, most deservedly, a gratuity of \$10.

AWARD OF PRIZES.

RHODODENDRONS.—For the best, to H. H. Hunnewell, \$8. For the next best, to Hovey & Co., \$6.

AZALEAS.—For the best, to R. Oldreive, \$6.

For the next best, to H. H. Hunnewell, \$6.

GRATUITIES.—For six fuchsias, to J. W. Brooks, \$10.

For ranunculus, to B. K. Bliss, \$3.

Other gratuities for flowers were also awarded.

June 10.—Exhibited. Flowers: From J. Sanderson, fine specimens of the handsome Virgilia lutea; splendid peonies, from Hovey & Co., comprising the following sorts: Festiva, Festiva maxima, Sinensis Delachi, Fulgida, Arsene Murat, L'Eblouissant, Ne Plus Ultra, Hericartiana, Francis Ortegat, and Boesuet. Cut flowers from various exhibitors.

FRUIT: From C. S. Holbrook, magnificent Early Crawford peaches. From J. Todd, Hingham, beautiful Hovey peaches.

June 17. Rose and Strawberray Show. The show of roses was large and fine, and the specimens better than usual. Sweet Williams were exceedingly fine, and the several stands made an effective show. The cut flowers, pinks, baskets, and bouquets, were all superior.

AWARD OF PRIZES.

JUNE ROSES.—Class I. For the best 20 varieties, to Hovey & Co., \$4.

Class II. For the best 10 varieties, to J. Nugent, \$3.

For the next best, to J. Breck, \$2.

HARDY PERPETUAL.—Class I. For the best 20 varieties, to H. H. Hunnewell, \$6.

For the next best, to J. C. Chaffin, \$4.

For the next best, to Hovey & Co., \$3.

Class II. For the best 10 varieties, to J. McTear, \$3.

For the next best, to J. Nugent, \$2.

TENDER Roses.—For the best display, 10 var., to J. Nugent, 94.

For the next best, to J. McTear, \$3.

GENERAL DISPLAY OF ROSES.—For the best, to J. C. Chaffin, \$5.

For the next best, to J. Nugent, \$4.

Sweet Williams.—For the best 30 trusses, in 10 varieties, to Hovey & Co., \$3.

For the next best, to J. McTear, \$2.

PINES.—For the best display of 30 flowers, to Jona. French, \$4.

For the next best, to Hovey & Co., \$3.

For the next best, to J. McTear, \$2.

Prizes and gratuities were also awarded for cut flowers, bouquets and baskets.

Faurt: The strawberries were altogether the most effective show the Society ever made of this fruit. Besides the well-known kinds, Buffalo, French's Seedling, and Russell's Prolific were exhibited. From Hovey & Co. eleven varieties, as follows, La Constante, Emma, Hovey's Seedling, Empress Eugenie, Napoleon III., Admiral Dundas, Marguerite, Green Prolific, Lenning's White, Russell's Prolific, Triomphe de Gand, and Prince Frederick William. From Wm. Gray, Jr., Oscar, La Constante, Hovey's Seedling, and Triomphe de Gand. W. C. Strong, A. W. Spencer, J. W. Foster and others, sent good fruits.

AWARD OF PRISES.

For the best four varieties, for Hovey's Seedling, La Constante, Admiral Dundas and Marguerite, two quarts each, to Hovey & Co., \$20.

For the next best, to J. W. Foster, \$15.

For the next best, to Wm. Gray, Jr., \$10.

Gbituary.

DEATH OF SIR JOSEPH PANTON.—It is with deep regret that we announce the death of Sir Joseph Panton, which took place at Sydenham, June 8th, after a protracted illness, at the age of 63. The lateness of the month precludes an extended notice of his life and labors, which will appear in our next. His death will be lamented by a large circle of acquaintance, and the horticultural world has lost one of its most enthusiastic and ardent friends.

DEATH OF WILLIAM TODD.—Died at Roxbury, Mass., June 7, Mr. William Todd, gardener, in the 52d year of his age.

Mr. Todd was well known as one of the most skilful gardeners. At the time of his death he was gardener to W. C. Harding, Esq., of Roxbury, where he had been for upwards of two years, and was just beginning to show the results of his labors, in the management of the grounds. As a grape grower few excelled him. Mr. Todd was for several years in the employ of Messrs. Hovey & Co., and subsequently removed to California. On his return from the latter state he visited his native land. Mr. Todd was a native of Richmond, Yorkshire, England. Gentlemanly and courteous in his manners, ready to impart information to all who sought, his death will be lamented by those who knew him. (Nova Scotia papers will please copy.)

Forticultural Operations

POR JULY.

FRUIT DEPARTMENT.

JUNE has been a warm and beautiful month, with just enough rain to keep vegetation in fine condition, and a temperature sufficiently high without being excessive at any time.

VINES in the early houses will still be at rest, and require very little care; the only thing necessary being to secure thoroughly ripe wood.

JULY. 328

Vines in later houses and greenhouses will now be swelling their fruit rapidly, and during the month will begin to color. Look over the bunches, and, if not properly thinned, cut away any superfluous berries, being careful not to thin so as to leave a loose straggling cluster. Many cultivators thin too much, and we think it best to err on the right side, and to our mind a bunch thinned improperly is worse than one not thinned at all. When the bunches are very large, as with the Syrian, Trebbiana, White Nice, &c., the bunches should be shouldered; that is, the shoulders should be tied up to the trellis so as not to press upon the bunch until the berries are swellen. Look over and regulate the laterals, stopping those a second time which have started into growth. Damp down the house, morning, noon and night. Vines in cold houses require similar attention, always being careful not to admit cold drafts on the sides of the house. Give all borders a good watering, if dry. Summer-prune hardy vines, and lay in the strong wood for next year.

STRAWSERRY BEDS will now require attention. Proceed at once to clear away all the old plants between the rows, where they have been allowed to run, and manure well and spade the ground deep, then rake and level, and as soon as the fresh runners begin to grow lay in the plants carefully at regular distances, and the beds will be nearly as good as those newly made. When the plants are cultivated in hills, or single rows, the soil should also be well manured, and dug in the same way. Keep spring planted beds clear of all weeds, and lay the runners as they grow.

PEAR AND PLUM TREES may be budded the last of the month.

SUMMER PRUNING should be continued at all times, cutting away the laterals and cross branches, to give air and light to the fruit.

THINNING FRUIT should be commenced immediately, before the crop has grown so as to exhaust the energies of the tree.

PEACH AND OTHER FRUIT TREES, in pots, should be well watered, until the fruit is well colored, when the quantity should be lessened. Use , liquid manure freely.

FLOWER DEPARTMENT.

The fine weather of June, with the advanced season, has made the garden as beautiful as it ordinarily is a month later in the year. Timely rains have given a vigor to all bedding plants, and they already present a gay appearance. July is the month when all the preparations should be completed for winter stock, repotting, pruning and putting in order everything before it is so late that they do not have time to recover from these operations. Take all leisure opportunity to collect soils and prepare them for winter.

AZALEAS will now be completing their growth, and by the end of the month should be in readiness to place in the open air to ripen their wood. Syringe and encourage their growth, and repot immediately all that require it. Stop pinching the shoots, except on young stock. Look out for thrips and red spider, and destroy in time.

CAMELLIAS should now be removed to their summer quarters, if not already done. Syringe, morning and night, and take this month to repot all that require it.

CINEBARIAS should be potted off, taking the young and fresh suckers; place in a frame, and keep close for a few days, till well rooted.

PELARGONIUMS will soon be out of bloom, and water should be sparingly given to ripen the wood previous to heading in, which should be done the last of the month, or early in August.

ACHIMENES, growing vigorously, may have another shift into larger note.

Cactures, now making their growth, should have a good situation in the open air, and have more liberal supplies of water. Repot all such as require it, and top-dress with very little guano.

OXALIS BOWIEI AND HIRTA may be potted this month, and placed in a cold frame.

EUPATORIUMS, STEVIAS, and similar plants, should be plunged out in an open sunny bed, and have an occasional watering with liquid manure.

CALADIUMS AND BREONIAS may have another shift. Shade from the moonday sun, and water rather freely.

BOUVARDIAS should be plunged out in a warm place, or, if grown in the house, have a shift into larger pots.

FERNS, of every kind, will require a shift into larger pots.

AMARYLLISES should be grown well, and have a warm place on a sheff near the glass. Without good foliage the plants will not bloom.

A. Belladonna should be potted now.

CHINESE PRIMROSES should be kept in a cool frame.

HELIOTROPES, and other flowers, intended for winter blooming, whould be headed in.

FUCHSIAS should have their final shift into large pots.

FLOWER GARDEN AND SHRUBBERY.

Give every attention to the lawn, and roll and cut as often as possible. Hoe and rake the beds, and clean and roll the walks.

GLADIOLUS, now coming into bloom, should be neatly tied to handsome stakes.

Dahlias should have attention. Water often, if dry, and tie up to a stout stake. Cut away all small superfluous shoots.

PEONIES should have the seed pods all cut off, as it will greatly strengthen the roots.

RHODODENDRONS AND AZALEAS should be cleaned of their seed pods.

HEDGES should be clipped immediately.

SHRUBS, all done flowering, should now be well pruned and headed in, to secure a young and vigorous growth of fresh shoots.

SEEDS of various perennial flowering plants may now be sown.

Daisies should be replanted, selecting a moist half-shady place.

Roszs should be layered this month.

AMERICAN HORTICULTURAL REGISTER.

The undersigned having been engaged to prepare and publish a Catalogue of American Nurserymen, Horticultural Dealers and Agents and Fruit Growers, desires to

procure-

I. Of Nurserymen throughout the United States—the Name, P. O., County, State, Acres in Nursery, Sale Stock for 1865-6, viz.: Number of Apple, Pear, Peach, Cherry, Plum, Apricot, Nectarine and Quince Trees; Grapevines, Currants, Gooseberry. Raspberry, Blackberry and Strawberry Plants; Stocks-Apple, Cherry, Pear and Quince; Deciduous Trees, Evergreen Trees; Deciduous Shrubs, Evergreen Shrubs, Vines, and Creepers, Roses, Perennial Flowers.

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IV. Of Fruit Dealers—Name, P. O., County, State.

Persons sending the above information, (with a three cent stamp for return postage,) previous to August 15th, will receive a copy of the Register free of charge.

Early, prompt and correct information is urged, and will make this a valuable book of

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W. C. FLAGG,

June 15, 1865.

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Primula sinensis kermesina splendens, (Chinese Primrose.) Very large fringed
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PRINCE DE LIGNE.

No. CCCLXVIII.

AUGUST, 1865.

EDITED BY C. M. HOVEY,

Charles

AUTHOR OF THE FRUITS OF AMERICA.

MONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF GINCINNATI, NEW HAVEN, NEW BEDFORD, WORCESTER, ROCHESTER, BUPFALO, CLEVELAND, WILMINGTON, ETC. ETC.

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4 00	4	-	-	-	-	-	ed,	y spott	" selected seedlings, very finely
500 ,	15	-	-	•	-	-	•	в, -	Melpomene, with deep blood-colored spots,
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4 00 4 00 5 00 9 00 9 00	4 4 15 9 9			-	-		•	y spott	"roseum, rose-spotted, -rubrum, crimson-spotted, - "selected seedlings, very finely Melpomene, with deep blood-colored spots, Terpsichore, large, rosy crimson spots, - Urania, blush-tinged and crimson-spotted,

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One of the most beautiful of Japanese coniferous trees, which has proved entirely hardy in our climate. It grows rapidly and forms a large tree, with a very deep green foliage, and elegant habit. Young trees, \$2 each.

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A most remarkable variegated variety of the T. dolabrata, with the same elegant foliage distinctly variegated with silver, very ornamental. It is equally as hardy as the parent. 22 each.

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A splendid coniferous tree, perfectly hardy, with a beautiful habit, and slightly drooping branches. Young trees, \$1 to \$3 each.

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Prices on application.

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R CULINARY VEGETABLES.

In no department of gardening has there been less real progress than in the culture of our vegetables. Not that there has been no improvement, but not at all in proportion to the improvement in the growth of fruits, plants, or flowers. There is certainly a rather better quality offered in our markets, through the intelligence and industry of some of our skilful and foreseeing market gardeners; but with amateurs, and the people generally, this has been less prominent, and in fact, except within the range of large cities, and where emulation has been created by the exhibitions of horticultural and agricultural societies, and the offer of liberal premiums, twenty years have shown but slight advance. Individuals who cultivate their small or large vegetable garden, as well as practical men, seem to ignore the idea of improvement in vegetable culture.

Nor does this neglect lie at our own doors. In Great Britain the same complaint is made, and the attention of the prominent gardening journals has been directed to the subject, with the hope of arousing cultivators to the importance of good vegetable growing. The Gardeners' Chronicle of last year took up the subject, and in an article which struck us as peculiarly applicable to our country, urged practical men to devote more time to vegetable culture, believing it to be the foundation of all good gardening, and without a good knowledge of which they must fail to attain the high standard of their profession. We made "a note on't" at the time, and are glad now to have an opportunity to present a portion of it to our readers.

There has been no lack of energy or enthusiasm on the part of our prominent and responsible seedsmen, to introduce all the new vegetables from abroad, or to bring out any that may have been produced at home; but for the want of some system, and the lack of that class of seed-growers who are so numerous in England, and who take especial pains to give

the newer sorts a trial,—not always, to be sure, wholly impartial,—for a long time we could only find them in Catalogues, or through the pages of our Magazine, and of course generally with but little knowledge of their real merits. This was the case a few years ago, but, thanks to the exertions and continued labors of one who knew the needs of the seedman and seedgrower, as well as all lovers of good vegetables, such a want does not now exist, and we have only to consult the work, which has been the result of long and careful observation, to learn everything that can be well known in regard to all the vegetables at present considered of much value.

The second edition of Mr. Burr's volume,* delightfully got up, in clear type, beautiful paper, elegant engravings, and rich binding, is now before us, and it is truly refreshing to sit down to something original, and at the same time interesting and really valuable; for the mass of American works of this class are mere compilations from various English and French authors, without one word of acknowledgment, and that too when page after page, and engravings entire, are palmed off as the production and taste of the authors. Not so is Mr. Burr's book; nearly every variety enumerated has been under trial by the author or his friends, who have assisted him, and to whom he gratefully offers his acknowledgment. The engravings are from original drawings, from specimens furnished by Mr. Burr, and are not only the most truthful representations of the kind, but are executed with a fidelity and finish most remarkable. The illustrations are from the pencil of Mr. Spurge, who is not excelled in this department of art. After two years, and the exhaustion of the first edition, Mr. Burr brings forward his volume in a much more complete and perfect form.

When we talk of eleven hundred "species and varieties," the number seems fabulous, compared with the scanty supply usually found in our markets. But, as Mr. Burr truly

^{*} The Field and Garden Vegetables of America, containing full descriptions of nearly eleven hundred Species and Varieties, with Directions for Propagation, Culture, and Use, illustrated. By Fearing Burr, Jr. Pp. 667. Boston, 1865.

remarks in his preface, "though some vegetables have proved of little value, either for the table or for agricultural purposes, still it is believed such descriptions will be found by no means unimportant; as a timely knowledge of that which is inferior or absolutely worthless, is often as advantageous as a knowledge of that which is of positive superiority."

And now to return to the subject we have already referred to—the neglect of superior culture, both at home and abroad. We quote from the remarks of our English contemporary, which are applicable in just the same degree here:—

A northern contemporary has recently, not without reason perhaps, directed attention to the comparative NEGLECT OF THE VEGETABLE DEPARTMENT, both by the correspondents of the gardening periodicals, and by the rising generation of gardeners. Vines and peaches, orchard-houses and bedding plants, florists' flowers and exhibition plants, it is said, come in for their share and more than their share of discussion, but neither writers nor young gardeners appear to give the thought and attention it deserves to plain kitchen gardening, notwithstanding that it is the very foundation of the gardener's success in the battle of life.

That this is true to a certain extent there can be no doubt; and perhaps, so far as the horticultural press is concerned. for the very reason which the writer of the remarks we refer to has suggested, namely, that what are-rightly or wronglytermed the highest branches of the profession are the safest and most pleasant to roost upon. There may indeed be more of novelty in those matters which readers and writers appear alike to prefer, but at least we may assert that the hobbies which are thus in some cases so hardly ridden, are not of more importance to the gardening profession than is a thorough knowledge of the management of a kitchen garden, which, as is truly remarked by the writer referred to, "takes in a far wider range of society than any other department." "Most gardeners," he adds, "find the kitchen the most ticklish latitude, from which demands fall upon them with the most exacting promptitude; and he who can satisfy those artistes who prowl in white linen about the hottest regions of the hall, has reason to congratulate himself on being up to the mark in a department through which as much annoyance is likely to arise, as in any other with which he has to do." This, we think, no one will question.

It may not be urged as a reason for this apparent neglect of the vegetable department, that, taking a view of gardens in general, this department is uniformly managed with complete In how many of the thousands of gardens scattered through the land, would really good crops and good successions of crops of esculents be found, if a simultaneous examination could be made at any time between Candlemas and Christmas? A sprinkling of our best practical gardeners would of course be found up to the mark in this particular, amongst them doubtless some of whom fame knows but little; but in too many cases it would be seen that the crop of one kind of vegetable was out of all proportion to the rest, either through deficiency or superabundance, while the very importantindeed the most important—question of succession was either ignored or misunderstood. There are of course difficulties to be encountered in respect to seasons and weather, uncongenial soils, and limited means, all which may be beyond a gardener's control; but the aim should be (and this we hold to be the very perfection of kitchen gardening), to have an abundant supply to meet every reasonable demand, this supply being so regulated that there shall be no glut at one period and scarcity at another, but that every crop shall tell in the total as it comes to maturity, and yield its quota towards an uninterrupted succession-young, fresh, and crisp-of such vegetables as are preferred in each particular establishment.

It is moreover, by no means to be assumed that the ultima thule of kitchen garden cropping has yet been reached. Though the cultivation of all or most of our esculents, severally, in the hands of individual gardeners may have been, (we do not assert that it has been), carried very nearly to the highest degree of perfection, yet it is to be remembered that this is a very different thing from perfection of culture having been reached with the generality of vegetable crops, by all or even the majority of gardeners. There are yet remaining many dark recesses in our kitchen gardens—here in

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one position, there in another—which each require that a bright ray of light should penetrate their obscurity, so as to bring out in strong relief some real defect of treatment that is lurking there. We recommend the subject of enlightenment on obscure points of practice, to the notice of skilful gardeners of a thoughtful turn of mind, as one which if well worked up would earn for them an honorable eminence in the ranks of their profession.

We should perhaps have been less ready to open this subject in our columns, were it not that we heartily concur in what our Scottish friend writes in reference to its bearing on the interests of the rising generation of gardeners. the class of men to which we must look in the coming time, to maintain the proud position which British horticulture has attained. And in this connection we cannot refrain from an expression of regret that our great English Horticultural Society should have deliberately chosen the path of fashion rather than of fame. Surely there is no way in which it could better carry out the important charge committed to its care-namely, the fostering and encouragement of horticulture, in this our happy and fruitful isle, than by an earnest solicitude for the instruction of young gardeners, and by doing its part towards training and disseminating through the land such young men, well-informed in all the branches of horticulture, so that they might act as leaven on the general practice of gardening: permeating and elevating the whole And if this be so, it follows that to utterly neglect if not to repudiate such a duty, and to confine its efforts and its aspirations almost entirely to catering for the world of fashion, putting horticulture as much as possible in the back ground, is, to say the least, a dereliction of trust on the part of a body established for no other purpose than that of advancing horticulture. That the subject of the preparation of young gardeners requires attention is patent to the experience of all who care to observe. The writer to whom we have already referred remarks from personal knowledge:-"I do not know whether my experience corresponds with that of other gardeners who have passed a good many young men through their hands, but I find the majority quite as

deficient, or even more so, in this department than in any other. There are plenty of worthy young men who, were they called upon to grow a few genera of plants in pots, or to get up a good many thousand bedding plants, would do so with credit to themselves. But call upon them to subdivide a few acres of kitchen garden into allotments for the proportions of the different vegetables, and crop them with a proper selection of vegetables, and in a manner and at times which would ensure a proper supply for the season, and they would find themselves in a fix. There cannot be a more gross mistake on the part of young men, who, as soon as their two or three years of what is called an apprenticeship are over, indulge a ceaseless hankering to get into houses where forcing and plant-growing are carried on, before they have made themselves conversant with the details of a well-managed kitchen garden."

The evil at which we have just been glancing is somewhat characteristic of the age, and hence there is all the more need of its being honestly pointed out to those whom it most concerns. Young men are for getting on as they think, without duly remembering the old proverb, "the more haste the least speed." They either have too much pride to begin fairly at the beginning, or having begun there, they have too much impatience to wait long enough to enable them to practise thoroughly and exhaustively the elementary parts of their training; and in this eagerness to advance (which in itself would be laudable enough and only becomes otherwise when unduly indulged), they forget or are not sufficiently impressed by two things, which they get to know afterwards, sometimes even by bitter experience—first, that there is no success before them as general gardeners without a thorough knowledge of kitchen-garden practice as a basis, and secondly, that such knowledge is the most certain, as it is also the most accessible stepping-stone in the attainment of the information they need to enable them to undertake the management of other departments. Too many of them are afraid of rough work, and chafe at their necessary probation as journeymen, or they take to amusements and eschew study, yet at the very first opportunity they hasten to set up on their own account,

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it may be in some single-handed, or other inferior place, where in the case of the average of men comparatively little is to be learned by experience, a few only of the brighter intellects being capable from such stand-points of moving forwards. What wonder, therefore, that so few comparatively of the thousands of young men who turn to the pursuit of gardening, really distinguish themselves in after life?

This in a great degree refers to gardeners, and the necessity of a better knowledge of vegetable growing—and is only too true. The question with us is, are not our amateurs quite as much to blame as the poor gardeners, who often have so much thrown upon them here that without more help they could not give attention to the kitchen garden, if inclined to Do the mass of cultivators, not gardeners, in the meaning of the world, but those who possess a quarter or half or whole acre, and make cultivation a pastime, consider at all the necessity of thought in the supply and culture of superior vegetables? Are they familiar with the best varieties, and the superiority of some kinds over others? We fear not, and the evil exists because the idea exists that anybody can cultivate a vegetable garden. Until this idea is reversed improvement must be necessarily slow. "How is it." we often hear asked, "that they raise such fine celery as we see in the market?" or, "how can I get radishes, long, clean, and free from worms?" If there was no skill in these things, these questions would not be asked, for all would have an abundance of the best. But there is a real difference in vegetables, apparent to the most ignorant, and hence there must be skill somewhere. We may therefore consider that question at rest,—that to grow superior vegetables, supply them in abundance, in succession, in season and out of season. and at the least outlay of labor and manure, is in reality an accomplishment not easy, and one requiring forethought, industry, energy, and practical skill.

Believing it will be admitted we are greatly deficient in the cultivation of vegetables, we return to Mr. Burr's work, which is devoted more to a description of varieties than their culture, we may once more repeat that the best are yet too little known. A brief examination of the volume will reveal a list of varieties which possess superior qualities, but which are scarcely cultivated. It is true, as the author states, that all that are described are not valuable; but there are many much more so than is generally admitted. Occasionally a new sort wins its way into popular favor, yet far too many remain almost unknown. Every new pear has a fair trial, and why should not the new vegetables receive some attention; this arises, as we have shown, from the neglect of this important department of gardening.

The Massachusetts Horticultural Society, by the offer of liberal premiums, has done a great good in inducing cultivators to exhibit the best; and those who have been blinded by old notions, and cling to every old thing without a trial of the new, have been distanced by those who believe in progress, have had the sagacity to try all, and the good judgment to reject the worthless, and cultivate only the valuable. It is by such aid that improvement is made prominent, our markets supplied with vegetables of better quality, and the whole community benefited. Let the motto of such men be onward.

POMOLOGICAL GOSSIP.

STRAWBERRY SHOW IN NEW YORK.—The Show of Strawberries at the Agriculturist office in New York, for premium, was held on the 8th and 15th of June. The fruit was shown in larger quantity and better quality on the 8th, but the exhibition on the 15th included varieties not shown the previous week.

Quite a large number of kinds were exhibited. Mr. Thos. Cavanaugh of Brooklyn, N. Y., showed 41 sorts, and F. Brill of Newark, N. J., 17 varieties. Mr. S. Boyden exhibited a new seedling. W. A. Burgess of Glen Cove the Gen. Grant. Seedlings were also shown by Geo. Perry and Son, Georgetown, Conn.; William Teft, Fordham, N. Y.; and H. W. Tebbets, White Plain, N. Y. W. H. Romeyn, Kingston, N. Y., exhibited eight seedlings. There were, in all, twenty-

two exhibitors. The principal prizes were awarded as follows:—

For the best strawberry, new or old, to S. Boyden, for the Agriculturist, \$5.

Best 12 varieties, to F. Brill, Newark, N. Y., \$5.

Largest and best collection, to Thos. Cavanaugh, \$5.

Best market variety, 2 quarts of the Agriculturist, to O. Judd, Flushing, \$3.

Heaviest three berries, of any one variety, to S. Boyden, for the Agriculturist, (weighing 24 ounces,) \$2.

Best new seedling, to S. Boyden, \$5.

Other prizes were awarded for the second best, and for various varieties.

Undoubtedly the exhibition was very fine, but we are much surprised at the weight of the Agriculturist; three berries weighing only 2½ ounces. A few years ago we exhibited eighteen Admiral Dundas strawberries, which weighed just one pound; and Mr. Pell of New York produced berries of the Hovey, weighing two ounces each. La Constante weighs more than the Agriculturist. We had the impression that the latter, when well grown, would weigh two ounces each, as it has been called the largest strawberry in the United States.

RUSSELL'S PROLIFIC.—We have seen it somewhere stated that this strawberry was the same as the old McAvoy's Superior. Whether this is so or not we cannot say, as it is so long since we cultivated the latter we have forgotten its exact character. This and the Russell are precisely alike in fruit, and if Mr. Elliot says the Buffalo is identical with McAvoy,—and he ought to know—it will be another of the same getting up as the Bartlett, so highly praised by the same cultivators who discarded Boston Pine, and yet they are one and the same! When will the Philadelphia pomologists decide whether the Union or Mammoth are the same as Trollope's Victoria? Cultivators would like to know.

Splendid Grapes.—We have, of late, kept our grape growers informed of the progress of the culture of this fruit in Great Britain, and given some account of the splendid specimens exhibited from time to time at the London Exhibitions.

We now have to record another great achievement by Mr. Meredith, who appears to be the king of grape growers, in the production of a bunch of Black Hamburg, weighing NINE POUNDS, EIGHT OUNCES. We copy from the notice of the Exhibition:—

Grapes; the glory of these was a bunch of Blach Hamburg, shown by Mr. Meredith of Garston, near Liverpool, weighing no less than 9 lb. 8 oz. It was shown stalk downwards, and had six shoulders, each equal to an ordinary bunch, the whole forming quite a pyramid of jet black berries, covered with a beautiful bloom. To Mr. Meredith, therefore, belongs the credit of having shown the heaviest bunch of Black Hamburg grapes yet recorded, and the judges marked their sense of his marvellous success by awarding him the highest medal at their command. The same exhibitor had the best Trentham Black ever yet seen, and wonderfully fine Buckland Sweetwater, but the last did not appear to be quite ripe. Mr. Hill, gardener to R. Sneyd, Esq., had splendid bunches of Black Prince, Black Hamburg, and Meredith's variety of Black Alicante. From Mr. Osborne of Finchley came Black Hamburg, Buckland Sweetwater, and Snow's Muscat Hamburg, the last large and finely colored. Mr. Allport of Doddington, Cheshire, contributed very fine Black Frontignans and Ingram's Prolific Muscat, the latter bearing a striking resemblance, both in size, berry and color, to the former. Muscats were still green, the ripest of them were only just beginning to change color; but of Buckland Sweetwater we noticed several bunches with that bright rich golden tinge which it is highly desirable to find in Muscats; but which, on this occasion, was wholly wanting. Messrs. Lane, who of late years have exhibited excellent grapes, had fine samples of Chavoush, a new and promising white variety. Mr. Pottle, gardener to B. D. Colsia, had extremely well grown specimens of Black Prince, three bunches of which weighed 9 lb. 5 oz.; they were not, however, quite in perfection as regards ripeness. Three very fine bunches of this grape were also shown by Mr. Hill.

FINE GRAPES.—As an index of the increasing interest in the production of superior grapes, we may record the exhibi-

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tion of this fruit by the Massachusetts Horticultural Society, on the 14th of June. Mr. C. S. Holbrook had very fine bunches of Golden Hamburg, Black Prince, Black Hamburg, Wilmot's Hamburg, and others. H. H. Hunnewell had extra fine Muscat Hamburg, Golden Hamburg, Black Hamburg, and others, and Mrs. Durfee very superb Cannon Hall, and fine Black Prince, and other sorts. These specimens were very much superior to those exhibited the previous year, at the same season.

THE ALLAMANDAS.

Few greenhouse or stove-plants excel, in showy and effective aspect, the Allamandas. Vigorous in habit, free growers, and abundant and continued bloomers, they are always to be relied upon for show or exhibition purposes, and one or more of the different species always make up the dozen or twenty plants which carry off the main prize at the great London Exhibitions. Nor are they alone beautiful and valuable as exhibition objects. As ornaments of the greenhouse and conservatory few excel them in their profusion of bloom, and the long period they continue to display their large clusters of showy yellow trumpet shaped flowers.

But with all their attractions they are not often seen in our collections of plants, or, if they are, they are such ordinary specimens as to attract no particular attention, or give but a faint idea of the real merit of these plants. Cramped in small pots, kept in a cool part of the house, and watered abundantly, when they should be kept dry, they frequently die or damp off, and are pronounced too difficult of cultivation, or adapted only to the hothouse. Usually they are considered stove or hothouse plants, but in our sunny climate, where the greenhouse is equal to an English stove, a greater portion of the year, they grow freely, and, rightly managed, flower in great perfection, though this is enhanced where a higher temperature can be given earlier in the season. One species, the A. Schottii, will not certainly do for ordinary purposes, but the

A. neriifolia may be grown in any ordinary greenhouse, where we have plants at the present moment, without much care, covered with blossoms. A. Schottii is the finest of the family, and trained up the columns or rafters of the hothouse, is one of the most magnificent objects. Its golden blossoms, three or more inches in diameter, displayed in large clusters, find few equals in any collection.



10. ALLAMANDA NERIIFOLIA.

As we have said, the ill treatment of the plants has caused their neglect; and we only wish all lovers of plants to see a good specimen to know their worth; to obtain them is easy enough, if the due attention is given to their culture at the proper season; the plants grow freely from cuttings, and with proper care and high culture large specimens may be speedily reared. A. neriifolia (FIG. 10) will give some idea of the flowers, which are bright yellow, trumpet shaped, two inches long, and about two in diameter; these appear in clusters of six or eight, at the ends of the young growth. A. Schottii

and grandiflora are larger. The following article from the Gardeners' Chronicle, by one who has been a successful grower, will show to what perfection the Allamandas may be grown; a plant with 500 blooms would surely be as effective an object as could be exhibited. In fact our plant growers cannot well make a grand display without such things as the Allamanda, the Stephanotus and similar plants, and our spring exhibitions must be meagre until these receive more attention from our amateurs and enthusiastic plant growers. With increasing demands to fill our new Horticultural Hall with grand specimens of grand objects, these must not be overlooked. Preparation now will give good specimens for another year:—

Having been very successful in the pot culture of Allamandas, I beg to offer a few remarks on that subject. In this family are some beautiful species, which, when well grown, are very effective, especially for purposes of exhibitions—Schottii, grandiflora, and Aubletii I consider to be the best. When sent out, violacea was expected to prove an acquisition, but, unfortunately it has turned out comparatively worthless. It is like the Scotchman's horse, bad to catch, and when caught of no value. Let us therefore return to Schottii. Like the rest of the family this species requires high cultivation; that is, it should be grown quickly until it shows flower; then it should be encouraged to ripen its wood perfectly, after which it must be well rested and properly pruned.

Allamandas are all easily propagated by means of cuttings, which strike readily in a brisk bottom heat. Let us, however, suppose that the cultivator has a nice established plant, say in February, with three or four shoots on it. In that case I would start it immediately by plunging it in a brisk bottom heat in a plant stove or hot-bed, and as soon as growth had fairly commenced, I would prune each shoot back to the last two joints. When fairly broken, I would give a liberal shift, using the following compost for the purpose, viz., two parts rotten turf from a good pasture, and one part rough peat well broken and mixed with the turf, the fine mould be-

ing sifted out of it. I would then add silver sand, and see that the drainage was perfect. I would now re-plunge into a brisk bottom heat where the atmosphere was moist, and there was a considerable amount of light. Thus placed, the plants would make rapid progress, and would soon require stopping. which may be done when the young shoots are two feet long, shortening the strongest to two or three joints, and the weakly ones to one or the lowest joint. Suppose the young plant had four shoots on it when first pruned, it ought to have broken from two to four eyes on each shoot; there would therefore be at least twelve shoots to stop back. And the roots being in active progress, each of these would push from four to six eyes, when the plant would require another liberal shift, and as before, should be re-plunged in a brisk bottom heat syringing overhead every evening, and watering frequently with liquid manure in a clear state—weak and often being the rule. The plant should now be kept as near the glass as may be convenient, and it will require stopping again for the last time. The exact period to perform this operation will depend on the time at which the plant is wanted to be in full flower. In ordinary seasons Schottii requires twelve weeks from the last stopping until it is in full blossom. Aubletii and cathartica take about ten weeks, and the treatment just recorded is applicable to these also. last stopping each shoot ought to produce from four to six or more laterals, the whole thus amounting to 300 young flowering shoots.

During the latter period of their growth, and while in flower Allamandas will require a very liberal supply of water, which should be for the most part weak liquid manure. When flowering is over, water should be gradually withheld to a certain extent, in order to aid the ripening of the wood, previous to wintering the plants in a lower temperature and a drier atmosphere. Early in the following February the plants may be pruned and started in bottom-heat as in the previous season. Prune back to from four to six joints from the commencement of last year's growth and as soon as the plants have fairly broken they should be turned out of their pots, the balls reduced, and repotted into a smaller sized pot

than that which they had previously occupied, and be treated as recommended for last season, This will be the third season, after which the plants may be destroyed.

At Darlington Flower Show, last year, I exhibited Aubletii. three years old, with upwards of 500 flowers open on it at one time; Schottii, with upwards of 300; and grandiflora, 18 months old, with upwards of 200 blooms. The lastnamed species requires to be treated somewhat differently from the others. The compost for it should consist of two parts rough turfy peat, of a fibrous nature, and one part turfy loam, with the fine material sifted out of it, together with silver sand and charcoal, to keep all open and porous. plant being of a more delicate habit than any of the others. is also very likely to be infected with thrips, which immediately stops its growth. It therefore requires watching in order to be ready to fumigate it when necessary. Owing to its slender habit it will likewise not be prudent to stop it more than twice during the season, watering copiously with weak liquid manure, and mulching with sheep or deer dung. and using the precaution of fumigating with tobacco previous to the plant coming into flower. Grandiflora requires, moreover, to be pruned harder in than the three former varieties; it also requires longer to make a specimen plant, but as it is one of the best of the genus, it is well worthy of every attention.

HARDY ORNAMENTAL PLANTS.-No. 1.

FROM THE GARDENERS' CHRONICLE.

It is, I believe, generally admitted that some modification of the monotony of our flower gardens by the introduction to them of a few graceful plants, is, to say the least, desirable; and that it is worth our while to introduce a little more verdure and beauty of form, and thereby heighten the charms of the flowering plants which must always be the important feature of a flower garden. One or two of your correspondents have discussed this important question incidentally, and

it must be said obscurely. They beg the question by drawing comparisons between the "old mixed border and the parterre," and of course award the palm to the latter.

Now, as the worst bedding arrangement conceivable is better than the old mixed border, as generally managed, and as nobody has for some years at all events, advocated the claims of the old mixed border against those of the popular system, this mode of reasoning on the subject is very like building up a house of cardboard for the satisfaction of quickly knocking it down again.

The question, if fairly put, is a very simple one: Is it, or is it not desirable to add more beauty of form to our flower gardens by introducing to them a few good plants of elegant habit, flowering or otherwise, so as to allow of a little more freedom and beauty of leaf to "set off" our brilliant pelargoniums, calceolarias, &c., with greenness and grace—either intimately associated with them in the beds, or otherwise? I believe the general answer to this would be "yes, if it can be done well." Then who shall say we have not the plants to do it well?

Mr. Gibson has clearly shown at Battersea what are the capabilities of our house plants in this direction. When discussing his arrangement last summer, I said that many hardy plants might be used with the best effect, and that in fact it would be possible to have some very charming effects without the expense or trouble of wintering and protecting. Some of the "sub-tropical" plants, such as Aralia papyrifera and the castor oil, it should be borne in mind, are to be raised in quantity almost as easily as bedding plants themselves.

The suitable hardy plants are of various types of character. I shall begin with a few of fern-like leaf and aspect.

If Adiantum cuneatum could be grown in "the open" as freely as Stachys lanata, what a beautiful help it would be to the flower gardener! We could scarcely call him clever or ingenious who failed to use it with taste and effect. It is not given to me to propound a nostrum for so growing this beautiful and popular fern, but we have a plant which bears it as strong a resemblance as it is possible for any not a fern to do (indeed I am not sure that there is another fern so

like it at first sight), a plant moreover which is as hardy as a paying stone, and will bear any amount of wind, sun, or exposure—Thalictrum minus. It forms compact, roundish bushes, from a foot to eighteen inches high, very symmetrical, and of a slightly glaucous hue. It is a British plant and may be grown in any soil. It requires one little attentionto pinch off the slender flower stems that appear in May and June, and that is all. Not alone in its aspect as a little bushy tust does it resemble the "Maidenhair fern," as A. cuneatum is often called; but the leaves are almost pretty enough to be passed off on the uninitiated, when mingled with flowers, for those of the fern; they are stiffer and more lasting, and well suited for mingling with vases of flowers, &c. There are probably several "forms" or vars. of this plant, some of them, it may be, not answering this description, but I have the plants from which it was taken, and they may be propagated to any extent. Within the past few days they have been shown to Mr. Williams, of Holloway, and other good plantsmen, who fully agree with me as to the merits of T. minus.

Quite distinct in habit, and far more beautiful in leaf, is Tanacetum crispum, with gracefully bent leaves, cut as fine and looking as beautiful as those of Todea superba; and green as an emerald. It is as free growing and hardy a subject as any in our gardens; it does best fully exposed, and probably the only way in which it can be benefited after planting—in deep and rather moist soil it is best, but will grow "anywhere"—is by thinning out the shoots in spring, so that each remaining one shall have free room to suspend its exquisite leaves; thinned thus, it looks much better than when the stems are crowded, and of course, if it is done in time, they attain more individual strength and dignity.

Artemisia annua is a plant which has lately come out with a high character from the seedsmen for its gracefulness, and it is an elegant plant as far as I can judge, but quite inferior for distinction or beauty to either of the foregoing, which have the additional advantage of being perennial.

Meum athamanticum is one of the most elegant and gracefully cut plants in an order second to none other for these vol. xxxi.—No. viii. 16

qualities. The leaves are divided so finely as to appear as if they were made of vegetable hair, and the plant is dwarf and neat in habit, from 6 to 12 inches or thereabouts; easy of growth in ordinary soils, and perfectly hardy and perennial. It is probable that in dry seasons it might "go off" too soon for association with autumnal flowering plants, but for rockwork or mixed arrangements of any sort it is invaluable as a front line, or edge plant.

Dielytra eximia is a dwarf and neatly-habited plant, with a dense and very graceful leafage, far more so than any other plant of the order in cultivation, and valuable as a flowering plant too, as the brightly colored flowers remain on for a long time in spring and early summer. It generally grows from 12 to 16 inches high.

To go a step higher, few plants are more graceful than the best Ferulas—glauca, Ferulago, and tingitana; they are very noble objects in any position, but most suitable for such an arrangement as that at Battersea or the margins of shrubberies, &c., for though very beautiful in summer they would probably go off much too soon for the continuous growers of the flower garden. But no doubt the leaves of these and of other umbelliferous plants might be improved and much retarded by pinching off all flower stems as soon as they appeared.

FLORICULTURAL NOTICES.

NEW AND FINE ROSES.—Mr. Radcliffe, the prominent rose grower, describes some of the new roses as follows:—

As regards these, Lord Macaulay's native color is rich, glossy crimson; it, however, sometimes becomes very dark. It is a highly improved Jacqueminot, being better in substance, fuller in the centre, and of erect habit. The growth and foliage are good. It will stand sun well for two or three days, showing the value of substance. Lord Clyde is exactly like it in growth and foliage, and is also of great substance. It is glowing scarlet and crimson, and does not alter its color.

Lord Herbert is blooming here, and, though not so good for substance, is full, well folded, and beautifully formed; its growth and habit are good. These are three worthy roses. The, following are also first rate, and good in every respect, viz., Madame Victor Verdier, Pierre Notting, and Rushton Radclyffe, of which I have six plants in full and beautiful flower. These are fine, and well worthy of adoption, as are likewise La Duchesse de Morny, and the two crimson purple roses, Eugene Verdier and Baron F. de Kinkelein. The varieties just named are, up to this time, the best of 1864 and 1865. It will, however, take half a century to beat Chas. Lefebre, the best rose in any family. (Gard. Chron.)

827. BILBERGIA ÒLEUS Hook. PUTRID SMELLING BILBERGIA. (Bromeliaceæ.) Tropical America.

A stove plant; growing two seet high; with scarlet bracts; appearing in spring; increased by offsets; grown in light rich soil. Bot. Mag., 1865, pl. 5502.

A quite new and fine species, producing rich purple flowers, and brilliantly colored floral leaves. It was received at Kew, from the Imperial Botanic Garden of St. Petersburg, and is supposed to be a native of tropical America. It is a very showy species. (Bot. Mag., May.)

828. ASTELIA SOLANDRI A. Cunn. Dr. Solander's ASTELIA. (Liliaceæ.) New Zealand.

A greenhouse plant; growing two feet high; with greeniah white flowers; appearing in spring; increased by division of the roots; grown in light soil. Bot. Mag., 1865, pl. 5503.

A densely tufted plant, with long lily like leaves, and spikes of flowers, which appear in tufts or panicles on the stout scape. Not very showy, but a pretty plant, which grows and blooms freely in the greenhouse. (Bot. Mag., May.)

829. CATTLEYA QUADRICOLOR Lindl. FOUR-COLORED CATTLEYA. (Orchideæ.) New Grenada.

An orchideous plant. Bot. Mag., 1865, pl. 5504.

A splendid species of the superb Cattleya family, with pure white flowers, the lip tinged with four colors, rich and superb. Introduced some years ago, but appears to be a distinct species, though collectors in the same region have failed to find it. (Bot. Mag., May.)

830. Monochætum Dicrantherum Naud. Dicrantherous Monochætum. (Melastomaceæ.) South America.

A greenhouse plant; growing one foot high; with rose colored flowers; appearing in autumn; increased by cuttings; grown in rich light soil. Bot. Mag., 1865, pl. 5506.

"An excessively pretty plant, deserving a place in every warm greenhouse. It was raised from seeds received from the lofty Andes of South America, and bloomed at Kew in October, 1864. It grows a foot high, has the foliage somewhat of the Pleroma, and terminal spikes of rose colored flowers, not unlike Heterocentron roseum. As it flowers in autumn it would probably, in our climate, prove a good bedding-out plant. It is a very handsome species. (Bot. Mag., May.)

831. Arisæma Wightii Schott. Dr. Wight's Arisæma.
(Aroideæ.) Ceylon.

A hothouse plant; growing a foot high; with greenish flowers; appearing in spring; increased by offsets; grown in pesty soil. Bot. Mag., 1865, pl. 5507.

One of the curious Arads, with small flowers, similar to the Arums, of a greenish white, with the appendage to the pistil, about six inches long, gradually tapering to an obtuse point, and erect. An interesting, but not very showy plant. (Bot. Mag., May.)

832. CYPRIPE'DIUM LÆVIGATUM Bateman. GLOSSY-LEAVED LADY'S-SLIPPER. (Orchideæ.) Philippine Islands.

A hothouse plant; growing one foot high; with yellowish striped flowers; increased by division; grown in moss and turfy peat. Bot. Mag., 1865, pl. 5508,

This is a superb species of the Cypripedium, with tall stems, bearing three or more of the singular but beautiful blossoms of this tribe. The flowers are of a greenish yellow, the sepals elegantly striped, and the petals six or more inches long, very narrow and wavy. It is nearly related to C. Stoneii. The foliage is glossy and fine. Introduced by Mr. J. G. Veitch. (Bot. Mag., May.)

833. Arum Palæstinum Boiss. Jerusalem Arum. (Aroidese.) Jerusalem.

A greenhouse plant; growing one foot high; with blackish flowers; appearing in spring; increased by offsets; grown in light rich soil. Bot. Mag., 1865, pl. 5509.

A singular, though not showy plant, introduced by M. Veitch, from Jerusalem. It has large leaves, and singular black flowers. (Bot. Mag., May.)

834. HYPOSTES SANGUINOLENTA Van Houtte. BLOOD VEINED HYPOSTES. (Acanthaceæ.) Madagascar.

A greenhouse plant; growing one foot high; with purple flowers and variegated leaves; increased by cuttings; grown in light rich soil. Bot. Mag., 1865, pl. 5011.

A pretty addition to our variegated plants, with leaves about three inches long, of a deep green, with all the veins marked with pale purple bands. The flowers are small, and of no great beauty, though serving to render it more attractive. It is stated to be a native of Madagascar. (Bot. Mag., May.)

835. Phœnicophorium Sechellarum H. Wendl. (Palmaceæ.) Isle of Sechelles.

A hothouse palm ; with spotted leaves ; increased by offsets ; grown in rich light soil. Illustration Horticole, 1835, pl. 433.

This is another magnificent palm, which comes from the same country as the Verschaffeltia noticed in our last. A rich country indeed has the little Isle of Sechelles proved to M. Verschaffelt's collector. It appears singular that after the almost scouring of the globe for variegated plants, the noble palm should at last be found sporting into fancy colors.

The present plant is magnificent in aspect as well as rich in coloring. The leaves are nearly entire, and measure about four feet in diameter. They are light and dark green in alternate bands, running obliquely from the midrib to the edge, and these bands are more or less covered with small round bright red spots, and as the fronds grow older, they change to a yellowish orange, which color they retain for a long period. The frondal stems are also thickly studded with long stout black spines, which contrast conspicuously with the orange colored stems from which they project at a slight depression below a horizontal line. It is truly a magnificent object. (Ill. Hort., April.)

GARDEN GOSSIP.

Wellesley, the Residence of H. H. Hunnewell, Esq.— This beautiful place is now in fine order, and Mr. Hunnewell must be highly gratified on his return home, to find his absence has in no way diminished the ardor or enthusiasm of his gardener, Mr. Harris, in maintaining the high character of the place. The beautiful lawn is greatly improved, and what we at one time thought almost impossible to secure—on the light sandy soil of Wellesley—a fine green sward, Mr. Harris has accomplished. This has been done by constant mowing and rolling, by the aid of a one-horse lawn mower. This was only wanting to complete the otherwise beautiful grounds which rank Wellesley as one of the finest residences in the neighborhood of Boston.

Since our last visit, the trees and shrubs, notwithstanding the dry year of 1864, have made a fine growth; the rhododendrous, particularly, have a richness of foliage much superior to any previous year. The bloom, Mr. Harris informed us, was exceedingly fine, and the numerous seed pods confirmed his statement. Mr. Harris pointed out to us a fine lot of plants sent home by Mr. Hunnewell last spring, comprising some forty or fifty varieties; these, if hardy, will make the collection one of the most varied and complete in the country: the plants were nearly all making a good growth. A new feature in the grounds is an avenue of standard rhododendrons, planted out last spring. These were procured by selecting the strongest growing plants, and pruning off the side shoots. They are now making good heads, and in a year or two will be large compact specimens, full of bloom. Standards are extensively planted in English gardens, and at the time we were at Messrs. Waterer's, twenty years ago, they had acres of standards, varying from six to ten feet high, and worth from 25 to 50 guineas a plant. No more magnificent objects could be introduced into ornamental plantations.

The conifers all look exceedingly healthy and strong, and appear to be perfectly acclimated, even those which in some previous winters have been injured. The light covering of snow last winter was highly favorable, and the fact is fully verified, that, as the plants acquire strength and firm hard wood, they feel less and less the effects of severe cold. Cryptomeria japonica looked as bright and fresh as the hardiest tree. Cupressus Lawsoniana, certainly the finest

acquisition we have had, of which there are quite a number of specimens planted about the grounds, was making very rapid growth: the largest being fully eight feet high. Thujopsis borealis, also hardy and beautiful. In a small bed Mr. Harris showed us several pretty specimens of the rare T. dolabrata and T. dolabrata variegata, both of which proved entirely hardy last year without the least protection, thus establishing its entire hardiness; the certainty of which should at once give this elegant tree the first choice of the lover of coniferæ. Retinospora obtusa and pisifera, and p. aurea, all beautiful, are also hardy. We had but little doubt these would be quite as tough as the handsome R. ericoides, but that fact is now established. From these experiments we doubt not many more of the introductions of Messrs. Fortune and Veitch will prove hardy. The numerous specimens of the rare Picea Nordmanniana, and P. nobilis, are growing rapidly, and now making,—under a little careful management by Mr. Harris,-strong leaders. Mr. H. pointed out the difference between some grafted specimens and those raised from seeds, of P. nobilis. The grafted ones have the rich silver and blue tints which belong to some of the early introduced plants, which others do not have in so marked a degree. P. Cephalonica, pitchta, pinsapo, and others, have now become good sized trees, and the first is one of the most desirable and beautiful. It should be added to every choice collec-There are now quite a number of hardy Thujas, among which T. macrocarpa, gigantea, a new seedling from Japan, and T. Hoveyi, are conspicuous. Three or four very small specimens of the parasol tree, Sciadopitys verticillata, are growing slowly, but it appears to be quite hardy. This is considered the greatest acquisition made to English collections. It grows 60 or 70 feet high; and the leaves are thrown off in whorls, and are divided like the arms of a parasol. Among the variegated leaved déciduous trees, of which there are several, the Negundo fraxinifolium variegatum is by far the most distinct, constant and beautiful, with the airy habit of the parent, and a deep edge of pure white on each delicate green leaf. Magnolia Lenné is growing well among the other specimens and one plant produced one of its large and

splendid flowers. The variegated Japan honeysuckle grows vigorously, retains its golden netted appearance, and is perfectly hardy, and may be planted anywhere. Stuartia pentagynia is among the finest shrubs. Its large white flowers are just now in perfection.

Passing through the grounds we noticed many things which we have not time to enumerate, but we must not omit the new rock work, which has been extended, and now includes an arched entrance from one of the leading walks to the shrubbery. The work was executed last winter, and of course the planting was not done till late in the season. Here, every open space, provided in the construction, capable of holding a bushel or two of soil, Mr. Harris has filled, and in the older part, where those introduced from the house were planted with others growing a year or two, were some grand specimens of Begonia Rex, Calocasia esculenta, Canna gigantea, Pteris argyrea, Caladiums, Yuccas, and other things, with large and broad, or slender and variegated leaves, cropping out from among the rocks, covered with vinca, ivy, dwarf ferns, &c., the effect being very beautiful. In a year or two this effect will be greatly enhanced, by the introduction, in the corners of the arching and other spaces, of ferns and mosses.

We now entered the Italian garden, descending the long flights of steps, and reaching the margin of the lake, where, seated on one of the terraces we enjoyed the splendid view. The trees were all neatly cut, in all the fancy forms, and among them the standard Golden Yews were conspicuous. The shearing process is no light work now that some of the trees have attained the height of 15 or 20 feet. The white pines submit to the process, and form handsome objects. whatever the shape. Along the parapet, the golden variegated agaves and yuccas, in handsome vases, reminded us of Italian views, and the spiry yews in pots, ranged alongside of the entrance, were no less conspicuous and attractive. Returning along the lawn to take a look at the vineries and orchard-houses, we noticed one splendid bed near Mr. Hunnewell's house, arranged somewhat in the ribbon style, as follows:-Large strong plants of Tritoma through the centre AUGUST. 249

of the bed, Coleus Verschaffeltii on one side, and Perilla on the other; the two side beds, forming part of the whole, were planted with Cannas in the centre, and Coleus and Amaranthus melancholicus on each side. The bed has a most effective appearance, and this will be increased in August and September, when the Cannas and Tritomas will be in bloom. A large bed, near by, filled with Tom Thumb geranium was one mass of glowing scarlet. The Araucarias have been put into new boxes, and stood like sentinels, with their sparse rugged branches, along the walk near the margin of the lawn. Two huge variegated Agaves, with other plants, gave a tropical aspect to the grounds.

The vineries and peach-houses never looked better; the early crop of grapes was partly cut, but there were specimens enough left to show their excellence. The Muscat Hamburg, Golden Hamburg, Trentham Black, and Bowood Muscat, among the new grapes, were all very large bunches and large berries. Black Prince, Grizzly Frontignan and Hamburg, all fine, and the succession house looked equally well. The peaches and nectarines in pots were in full bearing, and the Early York, just about ripe. Figs were loaded with fruit; these are grown in a deep pit, adjoining the orchard-house.

In the open ground the Diana grapes were rotting badly, but other sorts looked well, particularly the Rebecca. A small trellis of pears, on the cordon plan, as given in our Magazine, was looking well. The pear trees have suffered, and still continue to suffer, from the blight, and we missed several handsome trees, which had to be wholly removed, after losing many of their main branches. The roses along the entrance walk, planted two years ago, were very vigorous, and we noticed fine blooms of Gen. Jacqueminot and others. The hedges were all trimmed with great neatness, and we must give Mr. Harris great credit for his thoroughness in every department.

THE EVERGREENS, THE RESIDENCE OF DR. E. G. KELLY.—In the early part of June, in company with the Garden Committee of the Massachusetts Horticultural Society, we visited Dr. Kelly's residence in the city of Newburyport, formerly known as the estate of Lord Timothy Dexter, who for a time occupied

the house. It is situated on one of the main avenues of the city, with a few hundred feet front, but extending far to the rear, and containing some ten or more acres. A portion of this is of recent addition to the place, but it has all undergone improvement, and is now more or less planted with fruit trees.

The house is situated very near the main street, and one principal feature of the place is the skilful manner in which the entrance has been arranged, so as to give seclusion, and at the same time admit of easy access. This has been done by an irregular drive-way, planted on each side by low hedges of hemlock, purple berberry and Mahonia aquifolium, with ornamental trees just sufficient to conceal the house, without the appearance of formality. The hemlock submits readily to the shears, and makes a pretty hedge, but we were greatly pleased with the specimen of the purple berberry, with its dark rich foliage, contrasting with the deep green of the hemlock. From this drive-way to the right of the house a covered walk leads through spruces and evergreens, to a neat bit of lawn, and around this to the fruit garden, each being concealed from the other by evergreens, principally hemlock and Norway spruce, neatly clipped to keep them from occupying the concealed space. This is a difficult work, as all know who have had experience. But Dr. Kelly has succeeded admirably in this, and has preserved the branches in most instances entire to the ground; thus preventing that ragged aspect which evergreens often have as they acquire age.

Here, standing in a conspicuous place, was the variegated hemlock, which we have already noticed in a previous volume. Without showing that distinct stripe which some might expect, it still has a light and silvery tint, each leaf being slightly margined with a paler tint of green. We were much pleased with it, and consider it a decided acquisition.

The pear trees, dwarf apple trees and grape vines, all planted out in neat quarters, hedged with hemlock, or Norway spruce, were in fine order, and generally having good crops. Dividing the old garden from the newer one, was a hedge of the Cornus sanguinea, which, in the winter season, has a pleasing appearance, with its dark red leafless shoots. One new feature was the introduction of the dry pine leaves from

the woods, with which the walks were covered, thus giving a soft and noiseless tread, and being at all times dry, clean and comfortable. This of course would be out of place in some gardens, but where the surrounding growth is evergreens, and the walks nearly covered in by their branches, they are in keeping. The constant drip from trees always makes the gravel walk damp and cold, but the pine leaves are always dry and warm.

Many new shrubs and trees are interspersed through the grounds, and the Weigelia has been introduced into a hedge with the privet, where, clipped at the proper time, it blooms profusely, as we saw it during our visit.

The main features of the place are the abundance of evergreens and their management, the great variety gathered into so limited a space, with the preservation of individual specimens, and the economy of management, the whole being under the care of the Dr. during his leisure time, with the aid of one man.

Gbitnary.

SIR JOSEPH PARTON.—In our last we announced the death of Mr. Paxton, and we now present the following account of his life and profession, from the Gardeners' Chronicle:—

In the death of Sir. Joseph Paxton, which occured at Rockhill, Sydenham, on the 8th inst., and was briefly noticed in our columns of last week, the country, and the lovers of horticulture and landscape gardening more especially, have lost one who had justly earned for himself an European reputation. He was, indeed, the "Prince of Gardeners" of the present century, and filled the high and honorable position to which he had attained with the greatest courtesy—being alike distinguished for his urbanity and ability, and for the marked success which attended all the works he undertook to perform. We feel confident there is not an individual, high or low, who knew his kind and generous disposition, but heaved a sigh, or let fall a tear of sorrow, on learning that he had been removed by the hand of death from amongst us.

It is now 42 years since the writer of these remarks had the pleasure of making his acquaintance, and while memory retains its place, the happy days he spent in the society of his now deceased friend can never be effaced.

As several erroneous accounts have appeared respecting the early part of Sir Joseph's professional career, we avail ourselves of the present opportunity to correct them by a brief statement of facts within our own knowledge. He sprang from a good Saxon root at Milton Bryant, Bradfordshire, where his father was a farmer, and where he was born in the year 1801. Having to gain his livelihood by the sweat of his brow, he selected gardening as his profession, and from the age of fifteen was for two years employed in the garden of Sir Gregory Osborne Page Turner, Bart., at Battlesdire Park, near Milton Bryant. From thence he went to Woodhall Park, near Walton, Herts, the beautiful residence of Samuel Smith, Eq., in whose gardens (then under the charge of Mr William Griffin-one of the most successful fruit and pine growers of his day) he continued for three years, and acquired during that time a thorough practical knowledge of the most important branches of horticulture. On leaving Woodhall he returned to Battlesden, and for two years was gardener there. In the autumn of 1823, being then 22 years of age, he came to London, and found employment in the garden of the Duke of Somerset at Wimbledon. About this time the Horticultural Society obtained a lease of some ground from the Duke of Devonshire, and commenced the formation of the experimental garden at Chiswick, and the erection of the various stoves, greenhouses, and pits that were considered to be necessary for carrying out the objects which the Society had in view. Here an excellent field presented itself for study and improvement to those young men who, like Paxton had a desire to obtain a thorough knowledge of all the requirements of their profession. Of this Paxton did not fail to take advantage, and, on the recommendation of Joseph Sabine, Esq., who (up to 1830) was the Honorary Secretary of the Horticultural Society, he was admitted on the 13th November, 1823, for improvement in the new garden, and was promoted in 1824 to be foreman of the Arboretum. Here it was that he had the good fortune to become known to his patron and friend, the late Duke of Devonshire, who took great interest in this department of the garden, and frequently applied to Paxton for information respecting such trees and shrubs as seemed new to him, or with which he was unacquainted. The trim and neat appearance by which Paxton was invariably distinguished, combined with his great intelligence, and that genuine manliness of deportment which lies at the root of all good breeding, made a favorable impression upon his Grace, who in 1826 engaged him to superintend his extensive and princely gardens at Chatsworth.

Mr. Paxton had now ample scope afforded him for exhibiting his knowledge and skill as a practical gardener, as well as his natural genius and good taste in landscape gardening and garden architecture. Under his masterly hand, as a contemporary truly observes, "the wild Derbyshire region in which Chatsworth stands became the wonderful place which drew visitors from far and near, and set the example of that princely development of grounds and plaisances which now marks the country seats of our great English families. Its fountains and Italian terraces; its rich woods.

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laid out and managed with such marvellous care; its hot houses, where the Victoria regia was first compelled to blossom; and the great conservatory, which was the precursor of the Crystal Palaces in Hyde Park and at Sydenham—all are now become familiar objects of admiration. But while Chatsworth attracted the loftiest personages as visitors, its grounds were still left freely open to dense manufacturing populations close at hand, and Paxton used always to dwell proudly upon this trait in the character of 'my Duke,' as he called him, who was willing to share with the humblest of his countrymen his own passion for flowers."

With the glories of Chatsworth the name of Paxton will long be honorably associated. He had an innate taste for the beautiful in art and nature, but it was one of his great merits that he knew where to stop and let Nature have her own way. Of the truth of this remark abundant evidence will be found in the many beautiful scenes which have been created from his designs, or executed under his superintendence.

But it was not alone in his capacity of a gardener that Paxton gained the favor and esteem of his munificent patron. He had an opportunity of displaying his skill and superior abilities in regard to some financial arrangements which he suggested, and which were attended with so much success, as to induce the Duke to intrust him with the superintendence of his large estates in Derbyshire. With a generous and noble appreciation of his worth the Duke was never weary of speaking in his praise, and hence Paxton's reputation was as great among the aristocracy as amongst those of his own class, who were the best practical judges of his works.

In 1850, when the scheme of the first Great Exhibition was projected. the name of Paxton became a household word. At that time he happened to be erecting a house of peculiar construction, which he had designed for the growth of that most remarkable plant the Victoria regia; and finding that none of the 240 designs that were sent in to the Building Committee accorded with their views of the kind of structure required for the purposes of the Exhibition, it occurred to him to submit a design that would obviate all objections. The result is a matter of history. The fairy structure was erected in Hyde Park, and was the wonder and admiration of all who had the good fortune to witness it, and view the vast amount of valuable articles which it contained. One of the most striking features in the Palace of 1851 was the crystal fountain, and the beautiful transept which covered the two large elm trees that now remain to mark the spot. It has been reported that the circular roof of the transept was designed by Mr. Barry, and not by Mr. Paxton, but such is not the fact. It is perfectly true that the roof in the original design is flat; but at one of the meetings with the Building Committee it was suggested by .them that the transept should include the great trees. Mr. Paxton went direct with Mr. Fox to his office; and while the latter arranged the ground plan so as to bring the trees into the centre of the building, the former was contriving how they were to be covered. At length he hit upon the plan of covering the transept with a circular roof similar to that on the great Conservatory at Chatsworth, and made a sketch of it, which was copied that night by one of the draughtsmen, and shown to Mr. Brunel, whom he had agreed to meet on the ground the next day. We have been thus explicit in order that our departed friend should not be deprived of the merit to which he is justly entitled. For the great services he rendered to the Exhibition her majesty was graciously pleased to confer the honor of knighthood upon him.

In the autumn of 1834, during our visit abroad, we had the pleasure of spending two days at Chatsworth, in company with Sir Joseph, and although we have already given our impression of this visit (Vol. XI., p. 84,) we cannot allow the present opportunity to pass without alluding to the courtesy, kindness and cordiality with which Mr. Paxton received us, and the many attentions he bestowed upon us during our visit. We arrived at Barslow late in the evening, stopping at the inn for the night. Early in the morning we started for Chatsworth, and called upon Sir Joseph. Unfortunately, he was absent, and would not beturn till night. We passed the time in looking through the palace and gardens, and awaited for the second day to see Mr. Paxton. We were not disappointed. Paxton had already, though early, been around the grounds with some distinguished visitors, and, as they were just leaving, he took us into his carriage, and drove us around every part of Chatsworth, the lawn, park, &c., and afterwards visited the great conservatory, kitchen garden, graperies, peacheries, &c., &c., pointing out to us all the alterations and improvements which had been made since he had been gardener at Chatsworth. We dined at the Duke's house, and passed the evening at his own residence, in company with Mrs. Paxton, discussing the progress of horticulture, both in England and the United States. We were at once impressed with Mr. Paxton's professional knowledge, and many of the improvements, such as the construction of the great conservatory and rockwork, showed his good taste, executive ability and practical skill. He was free from the egotism which characterized many of the gardeners we met with, and spoke in the kindest manner of the Americans he had seen at Chatsworth. In taking leave he expressed himself highly gratified at our meeting, and wished every success to our country and institutions. Our visit to Chatsworth, and the hours passed with Mr. Paxton, will ever be remembered as the happiest of our life.

Horticultural Operations

FOR AUGUST.

FRUIT DEPARTMENT.

THE month of July has been warm, with the exception of a few rather cool nights in the early part; with occasional showers, and no heavy rains;

on the whole remarkably favorable to the growth of trees and plants. The highest temperature has been 92°, and the lowest 45°.

Grape Vines in the early houses will now be at rest, and will need little or no attention until next month, when preparations should be made for pruning. Vines in graperies and greenhouses will now be ripening their fruit, and will be making their wood for another year. As the grapes mature abundance of air should be given during the heat of the day, and a small quantity at night. Discontinue damping the house so much as last month, look after the laterals which will be making a growth, and should be stopped in due season. See that the red spider and mealy bug do not get hold of the vines. Vines in cold houses will soon begin to color; continue the same operations as last month, damping down the house in dry warm weather, giving top air, and guarding against cold drafts, which will soon bring on mildew. Stop the laterals, from time to time, as they become crowded, or obstruct too much light and air. Hardy vines will need to have all superfluous wood cut away, but do not expose the fruit to the full sun.

ORCHARD-HOUSE TREES will now be ripening their fruit, and will require less water.

PEAR TREES should be summer pruned, taking off all laterals and second growths to either one or two buds of the main branch. Thin out all inferior specimens of fruit, and water liberally, if dry weather. Young stocks should be budded now.

STRAWBERRY BEDS may be made this month. Prepare the ground at once, if not already done, and by the 15th or 20th, as soon as the weather is cooler, set out the plants, giving one good watering, if the ground is dry. Spring planted beds should be kept free of weeds, and the runners all laid in or cut off, according to the mode of growth.

RASPBERRY PLANTATIONS should have all the old bearing shoots cut away.

APPLE, PLUM AND QUINCE STOCKS should be budded now.

FLOWER DEPARTMENT.

The season has been one of the most favorable for all kinds of plants. Plenty of heat and moisture have given them unusual vigor, and they are already as full of bloom as in ordinary seasons a month later. Now will be the time to look after the winter stock, and preparations should be made to secure cuttings of bedding stock for spring work. Collect and store up soils ready for use.

AZALEAS should now be removed to a half-hardy place in the open air, where they can ripen their wood. See that they are free from thrip and red spider, which are not so easily killed as in the house. Continue to water liberally, and syringe every day, until the buds are well swollen and firm. Discontinue all pinching, except on young stock, where it is desirable to secure short stocky plants.

CAMELLIAS should be syringed morning and night, and not too liberally

watered. Repotting should be done this month. Grafting and inarching may be done now.

CINERARIAS should now be propagated, if not already done, by potting the young suckers. Keep in a cool frame.

Pelareoniums should be cut down at once, and the cuttings be put in. Keep the plants rather dry for a few days, when they may be watered more freely, and as soon as the shoots are well broken the plants should be shaken out of the old soil, and potted in smaller pots, placing them in a frame until well established.

CALADIUMS AND BEGONIAS should have their last shift for the season.

FERRS, growing vigorously, should have larger pots.

Bouvardias, in pots, should have their final shift.

VERBENAS should be layered into small pots, for a winter stock.

CHINESE PRIMROSES should be kept in a cool frame, and, as soon as well established, shifted into larger pots.

CALCEOLARIA SEEDS may be planted now.

MIGNONETTE AND SWEET ALYSSUM SEEDS should be sown this month.

CACTUSES should be more freely watered now.

Roses, in pots, should have a shift, taking off as much of the old soil as possible, and put into clean pots.

HELIOTROPES should be repotted in good rich soil.

CUTTINGS of all kinds of bedding stock should be put in the last of the month.

JAPAN LILIES, in pots, done blooming, should be sparingly watered.

WINTER BLOOMING PLANTS, of all kinds, which require it, should now be repotted and pruned.

Poinsettias may have a final shift this month.

CHRYSANTHEMUMS should be freely watered, giving liquid manure occasionally.

ACHIMENES may have a final shift this month.

FLOWER GARDEN AND SHRUBBERY.

Continue to roll the lawn, taking advantage of the time immediately after a rain. Cut once a fortnight. Clean, rake, and roll the walks.

Dahllias should be regularly tied up, and superfluous shoots cut away.

GLADIOLUS should be tied up to neat stakes.

RHODODENDRONS AND AZALEAS may be transplanted the last of the month.

Roszs may still be layered and budded.

HERBACEOUS PLANTS, raised from seeds, should be set out in well prepared beds.

CARNATIONS AND PICOTEES should be layered this month.

STAKE and tie up all tall growing plants.

VERBERAS, now pegged down, will grow better, and fill the bed more evenly and regularly than when allowed to run at random.

AMERICAN HORTICULTURAL REGISTER.

The undersigned having been engaged to prepare and publish a Catalogue of American Nurserymen, Horticultural Dealers and Agents and Fruit Growers, desires to

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No. CCCLXIX.

SEPTEMBER, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMERICA.

HONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFORD, WORDESTER, ROCHESTER, BUFFALO, CLEVELAND, WILMINGTON, MTC. ETC.

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One of the largest and very finest kinds. Obtained the \$25 Silver Cup at Belmont, and one of the four sorts which obtained the \$20 prize offered by the Massachusetts Horticultural Society. Five years trial have proved it to be the finest Foreign Strawberry, and a productive and profitable market fruit. Plants, 50 cts. per doz., \$3 per hundred.

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The prize berry in New York, and believed to be a productive, large and fine variety. Plants, \$1.50 per dozen.

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Very similar to Russell's Prolific in size and quality. Plants, 50 cts. per doz., \$8 per 100.

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A real white strawberry, productive, fair sized, and of good flavor. 50 cts. per doz.

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A large and productive variety, light scarlet, and fair quality. 50 cts. per doz.

LUCINDA PERFECTA, with large fruit;

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WHITE PINE APPLE, and DEPTFORD WHITE, \$1 per doz.

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The largest strawberry grown, measuring 6 to 8 inches in circumference. \$1 per dos.

EMPRESS EUGENIE, very large; MARGUERITE, very large; EMMA, WONDERFUL, AMBROSIA, NAPOLEON III., DUC DE MALAKOFF, OSCAR, &c., at 50 cts. per doz.

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One of the largest, finest, and most productive varieties in cultivation; one of the varieties which obtained the \$20 prize. Plants, \$1.50 per 100.

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A large, early, productive, and delicious variety. Plants, \$1.50 per 100.

BRIGHTON PINE, JENNY LIND, AUSTIN, SCOTT'S SEEDLING, and TRI-OMPHE DE GAND, at \$1.50 per 100.

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Offer for sale one of the largest Collections of the splendid Japan Lilies, including many of their fine seedlings, which have been increased in sufficient quantity to offer to the trade. These Seedlings have been produced by hybridization with our hardiest kinds and are much stronger growers than the original species, throwing up stems five feet high, containing from fifteen to twenty flowers.

The prices by the dozen are as follows:-

Lancifolium album, pure white,	-	-	-	-	-	\$4 00
" punctatum (true), with delicate pink spots,	-	-	-	-	-	9 00
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" rubrum, crimson-spotted,	•	-	-	-	-	4 00
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Melpomene, with deep blood-colored spots,	•	-	-	-	-	15 00
Terpsichore, large, rosy crimson spots,	-	-	٠ ـ	-		9 00
Urania, blush-tinged and crimson-spotted,	-	-	-	-	-	9 00
Thalia, spotted with ruby,		-	-	-	-	9 00
Eva, distinct, dwarf, rosy lilac spots,	•	•	-	-	-	9 00

Lancifolium, rubrum and roseum, by the 100 or 1000 at liberal rates.

ALSO, THE FOLLOWING FINE LILIES BY THE DOZEN:-

L. Brownii, a superb white flower, trumpet-shaped, six inches long,	•	-	-	12 00
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Candidum, the old white lily,	-	-		2 00
Longiflorum, with very large white trumpet-shaped flowers,	-	-		2 00
Tigrinia, (Tiger lily,)	-	-	•	1 50
Martagon, various colors		-	-	4 00
Chalcedonicum, with small scarlet flowers,	_	-	-	4 00

Bulbs ready for delivery October 10th.

The months of October and November is the best season for planting these Lilies in the open ground. For cultivation in pots, they should be planted at the same time, and be wintered in a frame, protected from severe frosts, or they may be kept dry till February and then potted. They will then bloom beautifully in July and August. No plants of recent introduction are more valuable than the Japan Lilies.

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Respectfully invite the attention of the public to their very extensive stock of PEAR TREES, both standard and dwarf, embracing all the popular and new varieties, which they offer at wholesale or retail at the lowest prices. These trees are stocky, vigorous and of the most healthy description.

Catalogue forwarded to all applicants. Prices for trees in quantity will be promptly furnished on application.

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Offer for sale one of the largest and most complete collections of Foreign Grapes in the country, embracing every popular variety of merit, all raised from eyes from our own bearing vines, and true to name, as follows:—

Black Hamburgh, Black Hamburgh, Wilmot's No. 16, Black Hamburgh, Wilmot's, Victoria. Mill Hill Hamburgh, White Frontignan, Grizzly Frontignan, Black Frontignan, Chasselas of Fontainebleau. Black Prince. Lombardy, West's St. Peters, Gros Bleu. Barbarossa, Muscat Blanc Hatif. Bowker, Trentham Black, Muscat Hamburgh. Bowcod Muscat. Royal Muscadine, Chaptal. Lady Downes. Moranet,

Decandolle,

Canadian Chief, Muscat de Sarbelle, Muscat Madeira. Muscat St. Laurent. Purple Sweet Water, Champion Hamburgh, Muscat of Alexandria. Tottenham Park Muscat. Macready's Early White, Zinfindal. White Nice, Reigne de Nice. Syrian, White Tokay, Golden Hamburgh, Pope Hamburgh, Austrian Muscat. Prolific Sweetwater. Caillaba, Richmond Villa, Trebbiana, Marchioness of Hastings, Canon Hall Muscat.

Fine strong vines, one and two years old, in pots, ready for immediate planting.

Prices on application.

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Handsome Ornamental Shrubs.

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Offer for sale a fine stock of the following beautiful Shrubs and Plants:

Deutzia crenata flore pleno, (Double.)

A double variety of the Deutzia, perfectly hardy, growing 3 to 4 feet high, producing long racemes of double white flowers delicately tinted with rose. It is one of the most beautiful and valuable shrubs recently introduced. 50 cts. to \$1.90 each.

Daphne cneorum,

An old but very little known plant, perfectly hardy, evergreen, growing about a foot high, and forming a dense, pretty bush, covered with clusters of bright rose flowers of a most delightful odor, and blooming from spring till autumn. It forms one of the finest shrubs for the garden. \$1 to \$2 each.

Japan Variegated Honeysuckle,

LONICERA AUREO RETICULATA.

Introduced from Japan by Mr. Fortune, and has proved quite hardy in our climate. It is a slender twining plant, with roundish oval leaves of a clear green, distinctly veined with light yellow, giving it a highly attractive and novel appearance. Flowers yellowish white, and deliciously fragrant. 50 cts. to \$1 each.

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One of the most beautiful of Japanese coniferous trees, which has proved entirely hardy in our climate. It grows rapidly and forms a large tree, with a very deep green foliage, and elegant habit. Young trees, \$2 each.

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A most remarkable variegated variety of the T. dolabrata, with the same elegant folage distinctly variegated with silver, very ornamental. It is equally as hardy as the parent. \$2 each.

Cupressus Lawsoniana.

A splendid coniferous tree, perfectly hardy, with a beautiful habit, and slightly drooping branches. Young trees, \$1 to \$3 each.

IONA AND ISRAELLA GRAPES.

HOVEY & CO.

53 North Market Street, Boston,

Offer for sale a large stock of these two new varieties, which have been pronounced, by all who have tested them, superior grapes, and worthy of general introduction. They are described as follows:—

Iona. Bunch and berries large, of a delicate pink or wine color, and possessing a rich, brisk, and vinous flavor: vines healthy and hardy, ripening just after the Delaware, and very productive.

ISRAELLA. Bunch six inches long, with a shoulder; berries large, black: every way a most excellent grape, ripening as early as the Hartford Prolific, and far surpassing it in quality.

Prices on application.

ALSO.

Crevelling, Hartford Prelific, Rogers' Nos. 4 and 15, Winchester, Union Village, Diana, Rebecca, and other grapes.

FRUITS AND FRUIT CULTURE IN THE WEST.

THE cultivation of fruits is rapidly extending throughout the great West; it is even progressing with greater rapidity than with us in the older States; perhaps because we have advanced so far that improvement is not so perceptible; but we are inclined to think that there is more enthusiasm and energy among the western fruit growers and cultivators, and more cooperation among them to elicit information and facts, bearing upon the whole subject of fruit growing, than in the Eastern States. We have now before us two good sized pamphlets, of nearly a hundred pages each, recording the doings of the Indiana State Horticultural Society, at its Fourth Annual Meeting, and the Twelfth Report of the Ohio Pomological Society for 1865, both full of varied, useful, and valuable information upon fruits and fruit growing, much of it local, but a great deal applicable to all parts of the country. Our western friends seem to be up and at work, and though in their rapidly extending population, which doubles in a few years, there is more need of such information than with us, still, we think the same zeal, and the same labor, freely given by State or local associations, would more rapidly diffuse a teste for superior fruits, and lead to the extensive planting. of trees in all parts of the country. The fears that our markets would be glutted with apples, or pears, or grapes, have not yet been realized, and we are inclined to believe that it will be many years before the poorer classes of our people will have the opportunity of tasting the best varieties of these Apples, the past winter, ranged from \$5 to \$10 per barrel, and with Bartlett pears, and rather ordinary peaches, at \$5 per bushel, is there not abundant room for a much larger supply at remunerative prices?

The principal business of these societies, and the substance of the reports already alluded to, was the discussion of the various fruits, and information—experience—relative to their adaptability to the climate and soil, their profitable culture,

&c. These are given in detail, but there is little new that we have not given in our report of the last meeting of the American Pomological Society. The more interesting matters to our readers are the addresses and reports made to each association. In them we find much that is interesting—more, indeed, than we have space to notice—but we select from each such portions as will add to the information of every reader. The Address of the President of the Indiana State Horticultural Society, I. D. G. Nelson, is very interesting, and, with much information, both local and general, contains the following upon pomological progress, and the duties of our horticultural societies:—

It will not be denied that progress has been made in pomological knowledge, and horticultural information generally, within the past few years; neither will it be denied that there is an abundance of room for much more improvement in the same direction—for ignorance and error in regard to fruit and fruit culture still prevails to a discouraging extent.

One of our chief objects here is to correct and improve the public mind on this subject, and if we fail in doing it, our mission has been fruitless. I think societies of this kind treat error too tenderly. It should be dealt with fearlessly and boldly, yet frankly and fairly, and as "confession is good for the soul," I freely confess that, although pomological and horticultural knowledge of the highest order prevails in the United States, and is not perhaps excelled in the old world, yet it is confined to the comparatively few and chiefly within the limited circles of amateur and professional horticulturists. It is not diffused among the masses. They are still groping their way in almost midnight darkness, apparently refusing to receive the light that is so freely and earnestly offered them through the medium of agricultural and horticultural journals and periodicals, horticultural and agricultural societies, as well as the various other channels through which flow light and knowledge.

Mr. Nelson thus alludes to "past errors," with "hints for the future":— The apple being the great staple fruit crop for market, as well as for family use for the million, I pass over the other delicious fruits for the present, and will drop a few suggestions on this branch of the subject. Having been a fruit-grower to some considerable extent for the past twenty-five years, and having paid dearly and bitterly for much of the tittle horticultural learning I have, I propose giving a few brief practical hints that may be of some use to others.

My great and leading error, like most other beginners, was, in the great number of varieties and the want of selection of suitable sorts adapted to the soil and climate—a most fatal error, which, added to the frequent blunders or impositions of nurserymen, who, I am sorry to say, are not always more honest than other men, has given me endless trouble for the past twenty years, and attended with not a little expense. I have been grafting and re-grafting ever since my first orchard began to bear, until I have converted nearly five hundred trees from probably half as many sorts into six or eight varieties, and am still engaged in grafting from twenty-five to fifty trees a year, and expect to continue the business, if I live, for years to come, and until the varieties in the main, are few in number, and those only of the most choice and profitable sorts.

For the benefit of others who have blundered into similar difficulty, and their numbers are legion, I will state, that my practice is to visit my orchards during the fruiting season. every day if possible, certainly twice a week, provided with a pencil, memorandum book, labels, and small strips of white muslin in my pocket. I take notes from time to time and from year to year in regard to the growth, healthfulness and productiveness of the trees, quality of fruit, kind of soil, treatment, and any and all other particulars that it may be important to know, before determining what disposition to make of any variety. When I become convinced that a certain variety for any cause is not worthy or profitable, no matter how good a reputation it may have established elsewhere. I tie a strip of muslin on a limb conspicuously, and attach a label with the name of the variety with which I wish it grafted written upon it, and when the grafters are at work. they see the signal and the work is soon done.

The following valuable information upon grafting old trees confirms Mr. Nelson's remark, that he has been a fruit-grower twenty-five years. Such knowledge can only be gained by long and "dearly" bought experience:—

Judging from the many inquiries I have received, and from the numerous grafted orchards I have seen, I am apt to think that the subject of after management of a grafted orchard is not well understood, and as the practice of grafting orchards is becoming more general, where the fruit from any cause becomes unsatisfactory, I will go on to say, that my custom is not to wait till the trees get large, but as soon as I get fruit from a variety for a sufficient length of time to become satisfied. I commence the work at once, and graft all of that variety, except a specimen tree or two-putting in two scions in each stock grafted. On or before the first of July I visit my grafted trees, and if both scions are growing, which will generally be the case if the work is well done. I pull out the weakest one, or the one least needed in shaping the top of the tree, rub off all sprouts, (and there will be plenty,) and enough of the limbs to give plenty of room, light and air, so that the grafts may make a good healthy This I continue through the season as time and opportunity offers, sometimes pinching the ends of the graft if growing too rapidly. The following year cut one half or more of all the old wood remaining—cut back the grafts if the growth is too great, which is rarely the case, and see that the tree is well balanced, especially not too heavy on the east side. If there have been any failures and more grafts are needed, put them in. If too many, cut them out and see that plenty of room, air and light is given again, through the growing season. The third year cut out all the balance of the old wood, and the job is finished except keeping the sprouts rubbed off, and sometimes stopping the grafts by pinching as before, to make them stocky. Trees thus managed make as fine an orehard as root grafted trees, and frequently much finer.

I will not name the few varieties that I am almost exclusively setting, as it would be of little practical utility, but

refer that branch of the subject for information, to the discussions of our society and to the lists recommended for different localities.

We wish we had room for more extracts, but as other subjects deserve notice we must omit them for the present. The first of these is the pear blight, which has made such havoc with the pear-trees in the West. As this has appeared in some few localities in our neighborhood, any information in regard to it may be valuable to our cultivators. Our respected correspondent, Dr. Kirtland of Cleveland, Ohio, sent a communication to the society, giving his experience with the disease, if such it can be called. After alluding to its appearance in New England, fifty years ago, and the theories which have been advanced to account for the blight, as well as its supposed cryptogamous origin, he concludes as follows:—

If these discoveries and analogies establish, with any degree of certainty, the hypothesis of the cryptogamous origin of the pear tree blight, we have made important progress in laying down true indications for its cure or prevention. Among the means suggested for effecting that end certain combinations of iron have already been named. The authority for such practice is founded on the following facts:

- 1. It is a popular belief that iron exerts a favorable influence over the health of fruit trees. Hence arises the practice of driving nails into the body of such trees and loading their limbs with scraps of iron. Both the belief and the practice may be visionary, yet in such instances of popular belief investigation usually discovers them to be founded on some shadow of truth.
- 2. An intelligent and observing gentlemen of Cleveland informs me that he prevents the curl of the peach leaf by depositing in the earth, about the bodies of the trees, fragments of rusty stove pipe and worthless pieces of iron.
- 3. Twenty-four years since I called the attention of the public to the isolated fact without reference to any theory, that a large pear tree in Columbiana county, O., with its body

surrounded with many wagon loads of boulders, scoria, scales of iron and accumulations from a blacksmith shop, retained its health, vigor and fruitfulness, while all other pear trees in that region of country, had either died or were suffering from blight. (*Vide* New England Farmer, Dec. 3d, 1840, page 153.) At this late day this tree still continues healthy.

- 4. I recollect reading in that reliable journal, Hovey's Magazine of Horticulture, some years since, a statement that the finest prize pears seen in the Parisian market, were produced by investing the growing fruits with folds of cotton or linen cloth, and daily, or oftener, moistening them with a solution of sulphate of iron. This treatment was said to result in developing the size, beauty and quality of the fruits to a high degree, and especially to free them from parasitic blotches.
- 5. Four years since Mrs. Weller Dean, of Rockport, Ohio, informed me that blight might not only be prevented in healthy pear trees, but might be successfully arrested, in many trees after it had made considerable progress, by means of repeatedly washing the bodies of the trees with a saturated solution of sulphate of iron (copperas) at a time when the sap is in active circulation.

This was a confidential communication, with the conditions annexed that I should thoroughly test the plan, and if it should prove successful I was to publish it, and furthermore, if any merit or more substantial reward should be deemed due to any one by the public, she was to be the recipient.

The plan has yet been only imperfectly tried. Age and infirmities will probably prevent its completion by me. I will therefore report that I have tested it on a number of my partially blighted pear trees, while a greater number has been left to die unmedicated. Of the former not one as yet perished, while of the latter very few survive. It has appeared, in every instance, to arrest the progress of the disease, and to impart a healthy condition to the bark wherever applied. The apparent results may have been coincidences, and not the effect of the remedy. There is much false experience in horticulture and agriculture, as well as in medicine.

These views suggest the expediency of extensively applying a solution of the sulphate of iron by means of a green-

house syringe or garden engine, to the tops and foliage of trees laboring under any of the diseases suspected of a cryptogamous origin. It also becomes a query whether the same agent may not be successfully employed at some period to counteract the potato disease, either by watering with it the growing plant or washing the tubers in it in autumn after they are dug. No injury has ever arisen to pear trees by the free use of a saturated solution of copperas.

In conclusion, I would observe that the discovery of the cryptogamous origin of many disorders of the human system is effecting important changes in their treatment. May we not hope that an extension of these discoveries to the vegetable kingdom may result equally favorable in shaping the practice in diseases of fruits and fruit trees.

Much other information we have to defer, to notice the Report of the Ohio Pomological Society, containing more extended reports on various subjects, and less discussional matter, but including a Fruit Catalogue for Ohio, and the excellent address of the President, Dr. Warder. As the most interesting information to a large class of our readers, we copy the following account of "the Cincinnati Method of Training and Trimming" grapes:—

In response to queries, Dr. Warder stated that the common plan of training in the southern portions of the State, was that known as the spur and bow method, with a stake to support the vine. This system requires a very different mode of trimming from that pursued when training on the trellis, though the principle of removing the bearing wood annually is the object in both instances. At the time of the winter trimming, the best new cane, coming out from the stalk as low down as possible, is selected to form the bow for next year's fruitage; this is shortened according to its strength, to a length of from two to four feet; and a low shoot is also selected, which is cut down to two eyes, forming the *spur* from which two canes are to be grown next season. All the rest of the wood is removed from the vine at the winter trimming. The vineyard thus pruned presents a very

bare appearance, and the novice will think it ruined, and that there can be no crop the next season, but experience shows us that there is always danger of over-fruiting the vine. The well being of a vineyard that is trained in this way will depend upon the manner in which the summer pruning has been conducted, and this will be recurred to under the appropriate head. The period at which the trimming should be done is at any time when the plant is dormant—after the falling of the leaf and before the first starting of the buds in the spring. No plant should be cut when it is frozen, and it has been a very common custom to trim during mild weather in February, or early in March; but recently fall trimming is being more and more practised. November is a good period, as the vines have then become completely dormant, though in a warm time the cut ends may bleed a little. After trimming, the vines being loosened from the stakes, are in a condition to be laid down for the winter protection, if this is considered desirable, and the experience of the last severe winter has induced many to think it important to endeavor to protect the vines in future; though few vineyards in that section of the State have ever received any care during the winter.

Training.—This consists of two quite different operations, the spring and the summer training. The former will first be considered. In the stake method the vigneron waits until the buds have begun to swell, and the sap has filled the vine and rendered it more pliable. Taking the end of the branch in his right hand he gives it a slight twist, supporting the middle of the cane in his left hand, he bends the shoot so as to form a bow, bringing the point down to the stake, where it is secured by a willow band. The middle of the bow is then tied to the stake at such a point as to make an even regular sweep of the cane, from the place where it leaves the stalk to where the point is secured to the stake. This may be a circle, or the segment of a circle, greater or less, according to the length to which the cane has been cut; the diameter of the bow is generally about a foot, and the plane of the bow should be placed in the direction of the row of vines.

Summer training and summer pruning, or trimming, are

conducted simultaneously, and need to be considered and discussed in the same paragraph. The former consists in tying up the two young canes that spring from the spur, and which are grown for the formation of the next year's bows. The bearing branches need very little training, but should receive great attention in the trimming, otherwise some of them will outgrow the canes, which will be so dwarfed as to render them unfit for making bows. Here lies the great importance of proper attention being paid to summer pruning, which has the double purpose of thinning and reducing redundant growth, and at the same time regulating the foliage and of directing the flow of sap into the canes or renewal shoots.

The first summer pruning should be commenced as soon as the buds have grown out a few inches in length, when the leaves are half expanded, and the blossom buds can be seen distinctly. Wherever two shoots have come from one bud, the weaker should be rubbed off; all "water shoots" or suckers must be broken out at the same time. Pinching may now be done, removing the tip of the shoot a couple of leaves beyond the bunch of grapes. This is done with the finger nail with great ease.

The object in pinching the tips thus early in the season is two-fold-first, to direct the growth of wood to the canes from the spur, which are tied up to the stake as fast as they grow to secure the same end; and, secondly, to check the too rampant growth of those bearing branches, and thus to render them more fruitful. This is secured by another result of the early pinching, which has the effect of making the leaves expand to a greater size. The new buds in their axils are rapidly developed, and very soon push out laterals, thus providing a new crop of foliage, which, in its turn, must again be pinched later in the season, to control the excess of growth and to cause the greater expansion of the leaves. this mode of proceeding a healthy growth of vigorous foliage is secured, to assist the development and ripening of the fruit later in the season, when the older leaves may have become dry or injured. The summer training of the canes requires repeated attention, to lead them up the stakes until

they reach the top; and all laterals are to be pinched off to this point. When the canes continue to grow beyond the tops of the stakes they are trained horizontally or allowed to hang down, and the laterals are left to grow as they will. The old system of shortening these canes at or near the top of the stakes is believed to be very prejudicial to the vines. The excessive thriftiness must have an outlet, and when the canes are cut or broken, the result is the bursting of the buds that are intended for the next year's crop, and strong laterals are thrown out. It is found that if allowed to grow at will, after reaching the tops of the stakes, there is no difficulty about the development of the lower buds which are to produce the next crop of fruit; and this very development is the object aimed at, as in the practice of shortening-in, of our fruit trees, or summer pruning.

It will be observed that the stake method of grape training is essentially the renewal system, as much so as where the vines are trained upon a trellis; but it should also be observed that its simplicity is its greatest recommendation, and that it is readily comprehended by the common laborer, whereas it is notorious that the trellis training is seldom found to be completely a renewal system, but that it is often impossible to produce strong, alternate canes to take the place of the bearing wood of the past year, and hence it becomes necessary to retain these and to adopt the spur system with them, on portions of the trellis. Another advantage, beside the simplicity of the stake and bow method of applying the renewal system, is that, if the vines be planted sufficiently wide, a better circulation of air will be secured than where continuous trellis walls of foliage cross the vineyard. This is believed to be a matter of great moment, and worthy of consideration by the vine planter, and thus we find that the spaces between the stakes has been greatly extended since the introduction of vine culture into our country.

To repeat: Trim when the vines are dormant, but not frozen; remove all redundant wood, leaving only so much for fruit as the strength of the vine will enable it to ripen, but avoid such severity of pruning as will force an excessive wood growth.

So soon as the young shoots have attained the length of a few inches, remove all redundant growths and all the ground suckers. Before blossoming, pinch the ends of all very strong fruit branches that spring from the bow, to control them, to make better foliage, and new leaves on the laterals that are thus forced out, and to encourage the vigorous growth of the canes that spring from the spurs, and which should be tied up from time to time, and relieved of their laterals till they reach the top of the stake, after which they may be allowed to grow at random, or may be trained horizontally from stake to stake.

In attempting to give directions to those whom we would encourage to embark in the cultivation of this delicious fruit, we should endeavor to avoid making too much of the difficulties that are incident to the work in hand. In the preparation of the soil, planting and training, there should be no mystery. Every thing connected with grape-growing is perfectly simple and plain, and there need be no difficulty in the matter; but some teachers have been so minute in their directions as to discourage many who might otherwise sit in comfort and with great satisfaction under their own vine, and gather the rich clusters that will be sure to roward them for their care.

In another number we shall give some account of Prof. Nyce's Fruit-House, upon which a report was made to the Ohio Pomological Society.

RAINY-DAY SCRIBBLINGS.

BY GEORGE JAQUES, WORCESTER.

WERE the readers of horticultural publications divided into two classes, the more intelligent portion would doubtless be somewhat surprised at the ignorance of the rest. It is to this latter class that the following hints are chiefly addressed, and —whatever they may be worth—they will prove none the less serviceable if communicated without further preface.

Abuses, &c.-Of the evidences of misapplied labor and expense visible about almost every country place one of the most common is where evergreen trees have been "trimmed up" in order to improve their appearance. This mischievous practice ought to be severely condemned; for the beauty of the trees under consideration consists in having their feathery spray so dense that no part of their trunks shall be visible, from the ground upwards. Wherever it is absolutely necessary to curtail the dimensions of an evergreen, the branches may be judiciously "shortened-in"; but to cut them off close to the trunk is sheer vandalism, and yet specimens of this abusive pruning can be found about many of the homes and in almost all the cemeteries of the United States. Again, wherever groups or belts of ornamental trees have been attempted, too close planting has been a very bad and almost universal mistake. Set out with a view to immediate effect and without forethought in regard to future growth, trees and shrubbery gradually transform themselves, after a few years. into a sort of tangled thicket of which the interior is a confused mass of dead limbs and naked trunks, while the exterior presents a meaningless expression without any beauty. The best procedure, in such cases, seems to be to thin out with a bold hand by digging up all the sickly and unsightly trees, and then to cover up whatever is bare and offensive by planting anew. The same remedy applies where incongruous plantations—as a mixture of firs and willows, for example have been made. Great improvements, in this way, may be produced at trifling expense. The outside of the plainest buildings, also, may be changed for the better, often by slight architectural alterations, and always by the application of a tasteful and appropriate color. The painter who spreads a warm neutral tint over chalk-white clapboards and flashy green blinds deserves the thanks of every traveller who passes in sight of them. Even common white-wash can be improved in color, at a most trifling expense, and its application costing scarcely nothing except a little labor, will greatly improve the appearance of outbuildings and fences.

Dwarf Trees.—An important consideration, before planting a dwarf, is whether we desire it to retain permanently

its miniature habit of growth. If so, the tree ought to be worked so low that it can be set out with the graft-joint just below the surface of the ground. Dwarf apples and pears thus planted, must be examined from time to time to destroy the borer, if found in them, and also to preserve their dwarfishness by preventing any rooting from above the stock. Dwarf trees, where the stock is buried three or four inches below the surface of the ground, often emit roots above the graft-joint, and thus assuming the character of plants raised from cuttings gradually attain nearly to the standard size. Such trees, of course, cannot by any severity of pruning be kept within the limited space which suffices for a permanent dwarf. The practice of setting dwarfs with any portion of the stock above the surface of the ground cannot be recommended. Dwarf trees ought to be kept well "headed-in," and otherwise carefully pruned, if the best results are expected from them. For orchard cultivation, dwarf pears may be advantageously set in rows (running north and south) eight feet apart, the trees in each row being about six feet apart.

Wounds .- Trees properly cared-for from the nursery to old age, would never require any pruning that a penknife could not perform; but the fashion in this country is to neglect pruning for years, and then to saw and hack without mercy. The treatment of wounds, caused in this way or by accident, becomes, therefore, an interesting subject of inquiry. That the edges of a wound made by a saw or otherwise should be smoothly pared with a sharp knife is obvious; but what next? Where anything is attempted, the common practice is to apply a coating of grafting wax, shellac dissolved in alcohol, grafting-clay, &c., &c. Having experimented with almost everything, my decided preference is for common paint, which, especially if dusted over, while yet fresh, with sand or dry loam, makes a most excellent coating, rendering the same service in preventing decay on the exposed wood of a tree that it does on wood in any other exposed situation, while it does not in the least impede the gradual process of healing over. Nothing is more easily applied, and if the coating is retouched every year the protection will be all the more complete. A little mixture of lampblack makes the paint so nearly of the color of the bark as almost entirely to hide the wounds. There need be no very great care exercised in the application, for a little paint upon the bark seems to occasion no injury. I once, in removing a limb from an elm, made a wound about fourteen inches long by seven wide. During some ten years that this was healing over I kept the wound well covered with paint, and, until I was no longer able to examine it with a penknife, no trace of decay was to be found.—and why not? If paint preserves the sides of a building or the bottom of a ship, why will it not have the same effect on a bare spot on a tree? Smaller cuts on other parts of my elm tree made at the same time and left unprotected, decayed to the depth of two or three inches. This experiment alone, not to cite others, seems so conclusive that I cannot agree with all that is said in an article on this subject, commencing on the 81st page of the volume of this Magazine for the year 1862.

Pruning.—Good cultivators are very generally agreed that it is the best practice to prune all fruit trees, every year, at the season of their "summer rest," say during the middle fortnight of June, continuing the use of the knife after that time, as occasion may require, until vegetation ceases in the autumn. There is also the best authority for performing heavy pruning—the pruning required for trees which have been long neglected—during their "winter rest," or from the fall of the leaves until the motion of the sap, towards spring, is sufficient to cause bleeding. Of this long period Cole preferred the earliest part; while Downing, Barry and others recommend February. The experience of some of the best cultivators in this vicinity favors the six weeks preceding the middle of December. But the season for performing the work is of far less importance than the manner of operating. In the first place, whatever implements—saws, shears, knives, or chisels—are used, should be in the best order for cutting. Not a movement should be made until after a careful inspection of the subject to be operated upon. Next, cut off such limbs as seem clearly necessary to be removed, carefully watching the effect of each amputation. Wherever you hesitate to remove a limb, let it remain. Never "tring up"

any tree, fruit or ornamental, unless you feel that you can satisfy a horticultural court of inquiry that the operation is The great end in view should be to form a well balanced head, of good proportions, having every branch so situated as to receive a due amount of light and air. To prune too close endangers the healing of the wound; to leave any projecting stump encourages the growth of troublesome When shortening-in soft or pithy plants, like the current or grape, cut at least an inch above a bud. In fine. exercise reason and judgment, and carefully watch the results of your operations, in order to learn by experience. Wounds made in pruning or otherwise, if not over half an inch in diameter, will take care of themselves; larger than that they may be covered as above advised, allowing them to dry a day or two so that the paint will better adhere. Where graftingwax is used, cover it with a leaf, or with paper, or dust it over well with dirt or sand, thereby rendering it less liable to erack off. The shellac composition recommended by Downing is so apt to come off that it cannot be relied upon.

Hedges, &c.—On a former occasion, it was recommended to trim hedges, box-borders, &c., oftener than is the usual practice. Two annual clippings seem indispensable, the first just after growth commences in the spring, the other, just before growth ceases in the autumn. This will secure a tidy appearance for nine or ten months in the year, and one or more intermediate clippings—not always necessary—will suffice for the rest. It does not answer to omit pruning hedges, &c., because we are impatient to have them attain a certain height. The only rational way to hurry forward borders of this kind, is to give them a deep generous soil, commencing always with smallish plants, if the finest results are desirable.

POMOLOGICAL GOSSIP.

PROFESSOR NYCE'S FRUIT-HOUSE.—In a preceding volume (XXIX., p. 258) we gave some account of Prof. Nyce's mode

of preserving fruit, at that time just put into operation. This mode has now had the test of two years, and it proves to be all that was predicted by the originator. Various fruits, particularly apples and grapes, are kept in the most perfect condition from six to nine months. In May last we had the opportunity of tasting a few Catawba grapes, which came from Mr. Nyce's fruit-house at Cleveland, and on the 29th of July, Mr. Williams Wales of Dorchester, who visited Cleveland, brought home fine specimens of the same grape, and three or four varieties of apples, which he sent to the Massachusetts Horticultural Society for exhibition, and which were in a fine state of preservation, the Catawba plump and fine, retaining its rich aroma, and the apples sound, crisp, and nearly as good as when gathered from the tree. We think we may safely say it is the only plan yet originated, which is capable of being made available, at a moderate expense, on a large scale. We shall allude to it again in another number.

THE KITTATINNY BLACKBERRY.—Some week or two since we were invited to accompany a party of cultivators to visit the locality in New Jersey where this new variety of the blackberry is grown, and examine the plants, and their productiveness, as well as the size of the berries, and also to taste the fruit. Unfortunately, we were unable to accept the invitation, and we requested one of the gentlemen who was present to send us some account of the fruit. As yet we have received none; but we find a brief notice of it,—by Mr. Chas. Downing, who was one of the party,—in the Country Gentleman, which we copy, doubting not we shall yet be favored with a more extended account of the berry:-Mr. Downing says he "visited several gardens, where it was more or less grown,-in one, I should think, to the extent of half an acre, (but only one with good cultivation.) As to vigor and productiveness I did not perceive any difference, except that the leaves were a little more serrated—size of berry being fully equal, but rather larger—decidedly sweeter, and an acquisition to this class of fruits. In one of the gardens the Kittatinny and Lawton were growing side by side, and apparently of the same age, so that we had a fair oppor-tunity to compare and examine them fully, and I consider

the Kittatinny the best blackberry I have yet seen. It is said to have been found in the town of Hope, N. J., near the base of the Kittatinny mountains, hence its name." Mr. Downing adds, that the quantity of berries on the bushes was immense, and this too without cultivation.

NEW MUSCAT GRAPES .- Mr. Rivers recently exhibited before the Fruit Committee of the Royal Horticultural Society several varieties of Musk or Frontignan grapes, which are reported upon as follows: -- Among the subjects submitted to the Committee was a collection of white grapes, from Mr. Rivers, all forms of what the French call "Muscats," and the English, "Frontignans." They have round berries, whilst in what are called Muscats, in this country, the berries are oval. The Frontignans possess a Muscat flavor, a quality which is highly developed in Chasselas Musqué. The great advantage of this Chasselas is its being much earlier than true Muscats, and ripening in a cooler temperature. It has, however, the bad quality of cracking, but within the last few years a new race has been introduced, which do not inherit this drawback, and of such Mr. Rivers's grapes consist. Of Early Golden Frontignan. Muscat Solomon of the French, the great recommendation is, that it is three weeks earlier than the Black Hamburg, and produces bunches from twelve to eighteen inches The color is golden, or, in fact, deep amber. Early Smyrna, Muscat de Smyrna of the French, is another form of White Frontignan, not so early as the preceding, but hardier, and will probably succeed well out of doors-at all events it will ripen well in the ordinary greenhouse. Early Silver Frontignan has a larger berry, a very thin skin, and is eight or ten days later than Early Golden Frontignan, and the same number of days earlier than the Black Hamburg. Muscat à gros grains from Bordeaux is remarkably early. much more sugary than the Black Hamburg, and a month These had all been ripened on vines in pots set on hot water pipes.

THE ADRONDAC GRAPE.—At the time we now write (Aug. 20) this grape is quite well colored, and indicates very early maturity, before the Delaware, which is yet nearly green. As this is the first vine which has ripened fruit in our imme-

diate vicinity we consider it as establishing the earliness of this fine grape. Mildew and rot have been more serious this year than usual, owing to the cold nights of the early part of July; but the Adirondac seems to have escaped injury, showing it quite as free from attack as other grapes.

HALE'S EARLY PEACH.—One of our young trees produced just one peach, and this was ripe August 7th. We have no doubt it is quite eight or ten days earlier than the Early York, while it is about the same size, and nearly or quite equal to it in quality. It is a very desirable acquisition.

THE SUMMER FLOWER GARDEN.

FROM THE GARDENERS' CHRONICLE.

It is unnecessary for us to commend the following valuable hints on the general treatment of the Summer Flower Garden. We might enlarge upon some of the points, but this we must take the opportunity to do in a separate article.—ED.

Our main purpose at present is to commend the Summer Flower Garden, properly so called, to the consideration of our readers. The whole broad country is a garden at that season and that perhaps accounts for the fact that the appreciation of the summer garden is often languid. And yet how beautiful is the array of summer tribes. About the middle of June the princely rhododendron hands over the floral sceptre to the rose, the undisputed queen of all flowers; and her train is crowded by many fine shrubs, such as Spiræa ariæfolia, callosa, &c.; the white and yellow brooms, the dwarf Coluteas, Robinia hispida, and the other Papilionaceæ of the middle season, and there are hosts of herbaceous plants usually so called. The early annuals, too, come into gay and lavish bloom; and towards the middle or the end of July the van of the verbenas, lobelias, and gazanias makes its appearance. Assuredly there is no lack of materials.

Let it be understood that for the Summer Flower Garden we do not recommend a separate enclosure, fenced off from

the rest of the grounds, though if there is any special reason for that arrangement it need not be avoided. We should prefer a portion of the flower garden, larger or smaller according to the extent of the place or the taste of the proprietor, in which the summer tribes are to be more particularly if not exclusively assembled, in order that for the time being they may produce a condensed effect. As the warm season makes shade desirable, the summer flower plots may be appropriately contiguous to the points where the kept grounds shade off into the park, and the transition between its lower denizens and the lofty trees of the outer region may be effected by the taller shrubs, such as the Guelder rose, Buddlea globosa, the Catalpa, Robinia viscosa, and many others. It is delightful to step readily from the glare of a summer sun to the shaded windward of a flower garden, whither the faint breeze comes loaded with perfume, cooled and softened as it were by the umbrageous shelter of the spreading branches. The eve looks forth from the shady place and sees everything in a finer distance and in a calmer light. In such delightful scenes all the senses are regaled at once; the thoughts succeed each other in sweet and gentle harmony; and even simple existence is felt to be a luxury.

The Summer Flower Garden, we venture to think, should be mainly in the mixed style of ornamentation; in other words, it should be filled by shrubs, herbaceous plants and annuals, skilfully combined and intermingled. This arrangement is rendered necessary by the rose, which is its principal and indispensable occupant. A summer garden without the rose would hardly be a garden at all. Of course it is well known that roses are often planted in separate compartments, called roseries, and that these compartments are laid out in parallel We cannot regard any roseries we have or concentric beds. ever seen as successful efforts of their designers. Their very structure gives them a stiff and formal look. As it was remarked, we think by Mr. Rivers, the rose is not a graceful shrub when out of flower; and we may add it is not very graceful even when in flower, only its glorious blossoms make us forget everything else. Rows of rose bushes, whether in straight or curved lines always reminds us of the old Linnean

arrangements in botanic gardens, which, even when they are without gaps, and are equally furnished, as they almost never are, are among the dreariest things in gardening. all means let such formal arrays of roses be discarded. But nothing forbids grouping or massing of rose bushes where it can be fitly done. What charming beds one meets with of the Common or Lane's Moss Rose, for example, of General Jacqueminot, Sonateur Vaisse, and other Hybrid Perpetuals, and where the climate is favorable, of the Tea-scented or the deepcolored China sorts. With the ordinary scattered grouping of roses, the finer shrubs above mentioned may be associated: and combined with these the more showy herbaceous plants, some of which do not mass well by themselves, such as the Hybrid Potentillas, the tall Larkspurs, and many of the species of Iris, may be copiously introduced. A few standard or pillar roses—we say a few. for an excess of standard roses is a nuisance—may be placed singly and in conspicuous places on the lawns. A similar but subordinate use may be made of some of the more striking herbaceous plants, such as Rudbeckia purpurea, Veratrum nigrum, Bocconia cordata, Asclepias syriaca, and various others.

But while we would adopt the mixed style of decoration for the principal part of the Summer Flower Garden, we we would strongly insist on the reservation of moderate spaces for masses of particular plants. A nook, for instance, should be kept for the fine hybrid varieties of Iris germanica and other species. Another plot or border might be dedicated to the numerous forms of Pæonia albiflora, edulis, tenuifolia, &c., many of which are exquisitely beautiful, and unfortunately not yet so highly appreciated in the floricultural world as they deserve to be. It is only, however, north of London that these irises and pæonies bloom so late as June, and therefore belong strictly to the summer garden. The bulbous irises, both I. Xiphium and xiphioides are well adapted for massing, and are very useful in skilful hands. We also warmly recommend the numerous progency of Phlox suffruticosa-many of which are remarkably fine, and afford admirable materials for light airy grouping as well as mass-The plant is extremely hardy. It requires, however, a

cool moist situation; and in dry localities it is greatly benefited by being grown in a mixture of rotted turf and peat. The fine varieties of P. decussata hardly bloom within the summer period. We beg our readers to allow us to recommend to them the old-fashioned Sweet William. humble opinion there is not a finer flower in the summer garden. Were such a plant to be introduced in the present day, the world would run wild about it. We do not, however admire the selection of a few prim Auricula-eved varieties; and the plants grown in rows at the distance of a foot and a-half from each other. Commend us to a good mixture of all colors, allowed to shoot up into flower in the seed bed. As this practice may be deemed inadmissible in a well-kept garden, where every space must be annually covered with some flower or other, the same result may be obtained by pricking out the plants in the place alloted to them at the proper season. Hardly so fine, but still very fine indeed is Dianthus sinensis Heddewigii, which may be treated much in the same way, though it is of a more delicate constitution. Certainly the greatest accession of recent date to the flower garden is to be found in the double and semi-double Pyrethrums, as yet comparatively little known; they are emphatically the coming flower of the day, and are destined to equal if not to surpass the finest China asters, perhaps we might even say the bulk of the China chrysanthemums. They are quite hardy, of easy culture, and are well adapted to form single plants, or groups, or masses, at the pleasure of the cultivator.

We have merely skimmed the surface of our subject, so far at least as plants are concerned. We intended to say something of the hardy liliums, one of the noblest families of the floral kingdom—yet what an insufficient use has been made of them in the summer flower garden! British botanists and florists have done miserably little for them in the way of the multiplication of their roots. Good collections of lilies are not at all common, even in botanic gardens of considerable pretensions. Would that another Herbert would arise and teach us something in regard to the lilials, as the truly venerable Dean did in regard to the amaryllids.

DAPHNE CNEORUM.

BY THE EDITOR.

It is rather remarkable that in the very general introduction of trees and shrubs, which have been added to our collections, during the last twenty years, one of the most beautiful should have been overlooked. This is the Daphne cneorum, (FIG. 11) a native of Switzerland and the Pyrenees, where it grows abundantly, about a foot high.



11. DAPHNE CNEORUM.

A few years ago it was accidentally introduced into the vicinity of New York, and was found to be perfectly hardy—growing dwarf and compact, and flowering profusely, nearly the whole summer. It was, of course, much sought after, and the gardens in that neighborhood abound in handsome specimens of this beautiful shrub. But beyond this locality it is yet very little known, and is rarely to be seen. Within

a year or two it has found its way into some collections, but is yet a comparatively new shrub.

The plant has slender shoots, small, pale green foliage, and terminal clusters of small pinkish flowers, which are delightfully fragrant. Its habit is dwarf and compact, growing only a foot or two high, but spreading out, and forming a dense bush, several feet in circumference, covered with flowers in May, and again in August and September. It flourishes in the same soil as the Rhododendron and Azalea, and is an admirable shrub to plant out with those, giving it a place near the margin of the beds, where it will not be overgrown, and where it will show its blossoms to more advantage.

It is now being extensively propagated by nurserymen, and we hope soon to see it in every garden. We know of no prettier object for the flower garden, the shrubbery, or the American ground, in either situation growing freely, and flowering in profusion. It also grows well in pots, and is just the plant for forcing in winter, when its delicate and fragrant blossoms are so desirable for bouquets, or adding to the ornamentation of the greenhouse or conservatory. It is propagated by layers or cuttings, or by dividing the roots. It prefers a peaty soil.

FLORICULTURAL NOTICES.

GREAT ROSE SHOW OF THE ROYAL HORTICULTURAL SOCIETY.—
This Exhibition took place July 1, and was one of the best displays made of that beautiful flower the present season. As showing what are now considered the best show roses, we give the names of those which carried off some of the prizes:—

In 24 kinds, Mr. Keynes was first, with Madame Chas. Wood, Madame Boutin, General Jacqueminot, Madame C. Crapelet, Madame Vigneron, Chas. Lefebre, Maurice Bernarden, Marechal Souchet, Madame Furtado, and Gloire de Vitry.

In the class of 18 new roses, we noticed Pierre Notting, deep violet shaded crimson; Rev. H. Dombrain; Charle-

magne, deep rose; Paul de la Milleray; Marechal Niel; Alpaide de Rotelier; Leopold Premier; Marechal Souchet, (Damazin) rosy carmine; Sœur des Anges, a beautiful pale rose, almost white; George Paul, fine bright red; and Madame Victor Verdier, all fine. Among yellows, the beautiful new Yellow Tea rose Marechal Niel was conspicuous; others consisted of Louise de Savoie, Cloth of Gold, Vicomptesse de Cases, L'Enfant Trouvé, Narcisse and Celine Forester.

CLIMBING DEVONIENSIS ROSE.—Mr. Rivers recently exhibited tall specimens of this rose, which he states is only the old Devoniensis. The vigorous habit in question, he stated to be the result of double budding—first the Manetti stock with a free growing hybrid perpetual, and then the latter with Rosa Devoniensis. Buds taken from the latter, and treated in the ordinary way, it was said, reverted to the old well-known form of that fine English rose.

CEREUS MACDONALDIÆ.—This large, showy, and superb Cereus, has flowered abundantly in our collection the present season, small plants, only two or three years old, and two feet high, producing blossoms as much as ten or more inches in diameter. It seems to be yet very little known. As showing the estimation in which it is held by English cultivators, we copy the following account of it from the Gardeners' Chronicle:—

A magnificent Cereus, which bloomed first in 1851, was figured a few years ago, at plate 4707 of the Botanic Magazine, under the name of Cercus Macdonaldiæ, having been received from Honduras, from Mrs. Gen. McDonald. A casual observer, as Sir W. J. Hooker remarks, might pass the plant as an unusually large flowered night blooming Cereus, but the slightest inspection of the stem and branches, and nature of the flower bud, the patent petals, and above all the great size of the flowers—fourteen inches in diameter from the tip of the sepals, and fourteen inches from the base of the calyx to the top of the stigma—all indicate a most distinct species. The plant is now out of flower, but a comparison of the two species, even in this condition, is quite enough to justify the separation. Sir W. J. Hooker, in a letter, states that the plant

at Kew, covering a great extent of wall and the rafters of the hothouse, has blossomed most freely during the present sum-And Mr. Glover, foreman of the propagating houses at Kew, has communicated the following memorandum on the subject: The Cereus Macdonaldiæ, having flowered remarkably well this season, I have ventured to trouble you with the following note concerning it. The period of flowering has extended over six weeks. Upon one occasion (May 30) eleven blooms were expanded at one time; upon another ten, and several times seven blossoms were open in the evening. During the month of May 37 blossoms expanded, and in June 46. making a total of 83 blooms. A great many more buds were formed, but the plant had not the power to open them. It is to be regretted that this and other sectional specimens of the genus can be seen by those only who watch the progress of the flowers, and visit the house after sunset in the evening. or before sunrise in the morning.

We are surprised that any remark should be made in regard to its specific distinctness. It is as unlike the Cereus grandiflorus, both in growth and flower, as the C. crenatus. Our plants had from two to three flowers open at once, and the largest measured full fourteen inches across. On one evening we had the C. Macdonaldiæ, C. grandiflorus, and C. nyctacaulis, a new and beautiful species, open at the same time, and a grand display it was. C. grandiflorus is highly fragrant, while the other two have no perceptible odor. C. nyctacaulis, in its habit of growth, might be taken for the C. grandiflorus, but the flowers are blush white, not quite so large as the latter, and have not the large sepals of the others. It is, however, a fine acquisition, and worth having in every collection of these singular growing but superb flowering plants. C. Macdonaldiæ grows very rapidly, is of the easiest culture, will flourish perfectly in an ordinary greenhouse, and plants two or three years old produce one or more flowers.

836. AUCUBA JAPONICA *Thunb*. JAPANESE AUCUBA. (Corneæ.) Japan.

A half-hardy shrub; growing six feet high; with scarlet berries; increased by cuttings; grown is rich, light soil. Bot. Mag., 1865, pl. 5512.

This is the new Aucuba which we have already noticed in

a previous volume. As it is likely to become a popular plant for pot culture, for ornamenting the lawn, or pleasure ground, where it will not stand our winters, we copy the following interesting account of it by Dr. Hooker:—

The Aucuba japonica affords a singular instance of the great length of time that may elapse between the first information of a remarkable plant being received, and an accurate knowledge of it acquired. This plant was first introduced from Japan in 1783, by a Mr. John Graffee, but only the female plant, and this under the well-known variegated form. From that one plant, the millions, now scattered over Europe and America, have been derived; but it is only within the last few years, that, thanks to Mr. Fortune, the male plant, in its native unvariegated form, has reached us. This, which we here figure, differs in no respect except color, from the cultivated plant, and, except that it bears abundantly handsome scarlet berries, it would have no chance of rivalling in popular estimation the variegated form.

Two other lessons may be learned from the history of the Aucuba; first, that varieties may be, and indeed in many cases, are as permanent as species. Of varieties, that consisting in discoloration of the foliage is supposed to be the least characteristic and permanent. And yet the Aucuba has retained its character unchanged through upwards of eighty years, in Europe, America, and the Colonies; and probably through many centuries in Japan. Secondly, that, though discoloration is usually attributed to disease, this may not be so really; for certainly the Aucuba has shown no sign of deterioration since it was first introduced. Several curious problems remain to be solved with regard to the Aucuba. such as, whether the old variegated form will seed well if impregnated by pollen of the uncolored, and whether its seedling will be as strong and healthy as its offspring by cuttings; whether the uncolored form will ever sport and become variegated, as many plants are apt to do on damp, clay soils; and whether the offspring of the uncolored and colored forms will lend most to the one or the other of its parents.

It is curious to read that the Aucuba, when first introduced, was treated as a stove plant, and even as late as 1809 was

cultivated as a greenhouse plant in Great Britain. In our climate it must be sheltered from zero weather, but may be kept in a cool cellar or warm shed. Any ordinary frost does not hurt it, and south of New York it will be perfectly hardy, and form a most magnificent addition to collections, its fine broad evergreen foliage being profusely decked with dense clusters of very large oval deep scarlet berries.

As a standard object for vases it will be a great acquisition. It is readily propagated by cuttings, and is already quite abundant in English nurseries. We hope to see it speedily introduced into our gardens, where possibly it may prove more hardy than the well-known gold dust tree as it is often called. (Bot. Mag., May.)

· 837. Rhaphiolopis Japonica, var. interregina Sieb. & Luc. Japanese Entire-leaved Rhaphiolepis. (Rosaceæ.) Japan.

A half-hardy shrub; growing three feet high; with white flowers; appearing in spring; increased by cuttings; grown in sandy loam and peat. Bot. Mag., 1865, pl. 5510.

"A remarkably pretty plant, with thick, evergreen shining leaves, and large, white odorous flowers. It is a native of Japan and the Korean Islands, and was received at Kew from the Royal Garden at Berlin. It has roundish leaves, and the flowers appear in dense terminal panicles, somewhat in the way of a rhododendron. Nothing is said about its hardiness, but, coming from Japan, we suppose it to be at least half-hardy. It is certainly a very pretty shrub. (Bot. Mag., May.)

838. VERBENA VAR. POPULARE. VARIEGATED LEAVED VERBENA.

Garden hybrid var. Ill. Hort., 1865, pl. 434.

This is a very pretty variegated leaved variety, an accidental seedling or sport among the English cultivators. It has scarlet flowers, and the edge of every leaf is elegantly margined with gold, giving it a unique and attractive appearance, and making a conspicuous object, trailing over the ground, displaying its scarlet blossoms on a bed of green and gold. It has not, we believe, been introduced into our collections. (IU. Hort., April.)

839. Camellia japonica var. Archduchesse Etienne. Garden Hybrid.

A greenhouse plant. Ill. Hort., 1865, pl. 434.

A handsome variety, with rather large and bold petals, imbricated to the centre, full, and of a pale delicate rose color, veined, and slightly pencilled with rose. It is one of the "gains" of M. Verschaffelt, and has a vigorous habit, flowering constantly and early. It bears a very great resemblance to the sports which we often see on C. Feastii, or still more to the Triumph of Baltimore, which it also resembles in the foliage. It may possibly have been one of these sports, fixed by grafting. (Ill. Hort., April.)

General Aotices.

TRANSPLANTING EVERGREENS .-- As the best season for moving evergreens is at hand, the planter, especially if economy of space is an object, must study well beforehand every step which he intends to take; and every plant he commits to the soil should have been previously well considered in reference to its ultimate growth and effect. The inexperienced are too apt to plant without forethought, and many of the objects which they looked forward to admire, are killed or smothered by others of more rapid and luxuriant growth. They should therefore endeavor to make themselves acquainted with the dimensions plants are likely to attain. Small gardens require great skill in the distribution of the different subjects with which they are to be ornamented, and much judgment should be exercised in the selection of them; therefore, instead of attempting to produce quantities of one kind of plant to the exclusion of others, it would be more satisfactory to limit the number of any particular kind, and thereby afford space for greater variety. The planter ought especially to avoid the too abundant introduction of coarse growing plants; on the other hand, however, he need not confine himself to too small plants; these would produce a monotonous effect.—(Gard. Chron.)

ZYGOPETALUM MACKAYI.—This is a fine winter blooming orchid. The length of time it lasts in bloom makes it a valuable plant for decorative purposes. To make plants suitable for this purpose they should be divided if required, and potted in good rich fibrous peat, in eight or ten-inch pots, with moderate drainage. This should be done in spring. It is a strong growing species, throwing up flower spikes with the young growth during the latter part of the summer, and flowering in December and January. The flowers are deliciously fragrant, and last some weeks in perfection.

As they make the most part of their growth during the winter they should have a moderate supply of water, and that, when required, should be applied in the morning. The flower spikes grow about three feet in height, and the flowers are about four inches across, the sepals and petals greenish yellow, mottled and spotted with brownish crimson; the tip large, nearly round, recurving at the point, peach white, beautifully striped and covered with rich violet. A few plants will perfume a house; each spike bears seven or more flowers. This species will do well in a cool house; the temperature in winter should range from 40° to 50° by night, with a rise during the day, a little air being given in mild days, and admitted just over the pipes, and not by the side lights, on a level with the stakes, as the cold air coming in contact with the plants, is apt to be very injurious to their growth. The temperature in summer must be guided by the weather. If hot and dry give an abundance of air and moisture, and dispense with fire heat. There are many varieties of this plant, some inferior to the one described. The following species are well worth growing, viz., Z. brachypetalum, Z. crinitum, Z. crinitum cæruleum, Z. maxillare, Z. stenochilum. These are all free flowering kinds, chiefly flowering in the winter months, and they require similar treatment to that recommended for Z. mackavi.-(Gard. Chron.)

BONAFARTEA JUNCEA --A specimen of this graceful leaved stove plant is now in flower here, in a 12-inch pot. The flower spike first showed itself on the 29th of May, since which time it has continued to lengthen very rapidly, and is now five feet long. The first flower opened on the 5th of July. The plant has been here upwards of thirty years. Three years ago it was shifted into its present pot, and many of the loose roots that had been formed cut away. It was repotted in peat and loam.—(Gard. Chron.)

Societies.

WORCESTER COUNTY HORTICULTURAL.

This flourishing society will hold its 26th Annual Exhibition at Horticultural Hall in Worcester, commencing on Tuesday the 19th, and continuing to the 22d. The schedule of prizes has been issued, and liberal premiums are offered for fruits, flowers, and vegetables. Among the premiums are the following:—

For the best collection of apples, 6 specimens each, \$10.

For the best 20 varieties of apples, 12 of each, \$8.

For the best 12 varieties of apples, 12 of each, \$6.

For the best collection of pears, 6 of each, \$10. For the best 25 varieties of pears, 12 of each, \$8.

For the best 10 varieties of pears, 12 of each, \$6.

With second and third prizes for the same fruits, and liberal prizes for grapes, flowers, vegetables, &c.

AMERICAN INSTITUTE.

The 36th Annual Fair of the Association will be held at the Armory on Fourteenth Street, New York, from September 12 to October 19, 1865. Liberal premiums are offered, of which the following are the most important:—

Best 20 varieties of apples, 5 of each, silver cup, \$20.

Second best 20 varieties of apples, 5 of each, silver plate, \$15.

Best 15 varieties of apples, 5 of each, silver cup, \$15.

Second best 15 varieties of apples, 5 of each, silver plate, \$10.

Best 30 varieties of pears, 5 of each, silver cup, \$20.

Second best 30 varieties of pears, 5 of each, silver plate, \$15.

Best 15 varieties of pears, 5 of each, silver cup, \$15.

Second best 15 varieties of pears, 5 of each, silver plate, \$10.

Best collection of native grapes, 3 bunches each, silver cup, \$15.

Second best collection of native grapes, 3 bunches each, silver plate, \$10.

Best collection of grapes, grown under glass, not less than 6 varieties, silver plate, \$15.

Second best, \$5.

Best collection of plants in pots, silver cup, \$25.

And numerous other prizes, from \$5 to \$10 each.

Also, the Townsend premium for the best table decorations, not more than 3 pieces, and not over 18 inches high, silver plate, \$25.

All the fruit must be brought in on or before Monday, September 18th.

NEW ENGLAND HORTICULTURAL.

The Second Exhibition of this new Society will be held at Concord, N. H., on the 5th, 6th, 7th, and 8th of September, 1865.

In addition to the numerous agricultural products for which premiums are offered, are the following, in the horticultural department:—

Apples.—Largest, and best collection of named sorts, 3 of each, \$15. Best 12 varieties, 6 of each, \$10.

PEARS.—Largest and best collection of named sorts, 3 of each, \$15. Best 12 varieties, 6 of each, \$10.

GRAPES.—Best new seedling, equal to Isabella, \$15.

Best display of native grapes, \$15.

Best display of foreign, \$15.

With smaller premiums and prizes for flowers, &c.

MASSACHUSETTS HORTICULTURAL.

The Thirty-Sixth Annual Exhibition of this Society will be held in the new Horticultural Hall, in Tremont Street, commencing on Tuesday, the 19th of September, and continuing till Saturday. It is expected that the display will be large, and very fine. The Halls are ample to accommodate all the exhibitors.

Horticultural Operations

FOR SEPTEMBER.

FRUIT DEPARTMENT.

THE drought of July has continued through August, for, with the exception of a few showers, the ground has not been wet to the depth of four inches since spring. Trees begin to suffer, and in some dry soils are entirely leafless.

VINES in the earliest houses, intended for fruiting, in February or March, should now be well pruned, washed, and put in order for growing. Clean, rake, and dig the border. At this season very little fire heat will be required, only on cold nights, or long continued damp weather. A temperature of 56° to 60° will do for September. Vines in the grapery or greenhouse, will be ripening their fruit, which should be gathered in the latter place before the plants are put in. In the grapery they may be allowed to hang till Christmas. Cut away all superfluous laterals, and give abundance of air to thoroughly ripen the wood and fruit. Vines in cold houses will begin to mature, and as this is perceived air more freely, there being less danger of mildew now. Keep the laterals topped and tied in. Hardy vines have suffered from the mildew in many localities this year. Where this is the case, the crop will be of little value; but where they have not, there is little danger after this.

STRAWBERRY BEDS, both old and new, will require attention. Old beds should be kept clear of weeds, and when the runners are extending too rapidly they may be cut off. New beds may be made in September. Owing to the drought the month of August was unfavorable. Get the ground ready, and proceed with the work as soon after a good rain as possible.

PEACH TREES should be budded.

ORCHARD-HOUSE TREES should be sparingly watered now, so as to get a full crop of well-ripened wood. Keep them in a sunny, warm aspect.

PEAR TREES may still be pruned, cutting off superfluous laterals as they appear, but preserving the terminal shoots, to be shortened-in in spring.

FLOWER DEPARTMENT.

The month of September is a very busy time, for many of the plants should be housed early, and very few are safe after the 25th of the month. Proceed at once to put the houses in order, repairing the flues, if they need it, cleaning the wood work, and destroying insects. Prepare a good heap of compost for potting or repotting all such plants as require it. Continue to collect soils, and get frames ready for receiving all such plants as can remain in them until severe weather.

CAMELLIAS should be removed to the house by the 25th of the month. Attend to the preparation of the plants by washing, staking, pruning out dead wood, &c. Wash every pot before it goes into the house.

AZALEAS, kept growing late, should now be watered less, and removed to the open air in a half shady place, where they can ripen the wood and set their buds. Very young stock may be kept growing.

CHRYSANTHEMUMS should now have an abundance of water, and liquid

Callas should now be repotted and freely watered.

Cran a process should be kept in a frame as long as the weether

CINERARIAS should be kept in a frame as long as the weather will admit. Fumigate for the green fly.

CHINESE PRIMROSES should be kept in a frame and receive more light and warmth. Cuttings may be put in now.

PELARGONIUMS should now be repotted; shake the old plants out of the soil, put into smaller pots, and place in a frame where they can be protected from heavy rains and the hot sun. Pot off cuttings and treat in the same manner.

BOUVARDIAS, planted out in the open ground, should be taken up and potted.

BEDDING PLANTS of all kinds should be propagated this month: a frame or old hotbed is the best place for this purpose.

CYCLAMENS should be repotted.

ORANGE TREES should be housed early, before very cool nights.

HEATHS should be potted and have the protection of a frame.

MONTHLY CARNATIONS should be potted.

NEAPOLITAN VIOLETS should be potted and placed in a cold frame.

STOCES for winter blooming should be potted, and placed in a frame till well rooted.

Nemophila and other winter-flowering annuals should now be planted and placed in a frame.

PLANTS of all kinds for winter blooming should now be looked over, repotted if they require it, tied up, pruned, and put in order for the house.

FLOWER GARDEN AND SHRUBBERY.

The very severe drought has given a yellow hue to the lawn, and checked its growth so much that mowing will hardly be required until after rain. Roll at once after wet weather. Clean, rake and roll the walks. Now is a good time to remove evergreens.

CARNATIONS AND PICOTERS should be watered if the weather continues dry.

Dahlias should be carefully pruned of superfluous laterals and the shoots tied up as they advance in growth: water freely.

HOLLYHOCKS may be propagated from cuttings. Seed sown in boxes and wintered in the house will produce plants which will bloom next year.

Passies may be propagated from cuttings, and seeds may be planted for spring blooming.

PRONIES may be transplanted this month.

JAPAN LILIES, now in bloom, will remain in perfection much longer if protected from the hot sun and heavy dews.

WHITE LILIES, and other kinds done blooming, may be reset this month-TIGER FLOWERS, TUBEROSES and other tender bulbs should be taken up before frost.

DUTCH

BULBOUS FLOWER ROOTS.

We have just received per Steamship Africa, a large and select assortment of the above favorite flowering plants, from one of the most celebrated Florists in Holland, and the same source as those heretofore sold by us, which have given such perfect satisfaction.

The assortment embraces the finest

Double and Single Hyacinths;
Early Single, Double, and Late Tulips;
Polyanthus Narcissus;
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Iris, English and Spanish; Snowdrops; Hardy Gladiolus; Scillas;

Japan, and other Lilies, &c. &c.

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Also a fine assortment of

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No. CCCLXX.

OCTOBER, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMERICA.

RONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BUDFORD, WORCLEFTER, ROCHESTER, BUFFALO, CLEVELAND, WILMINGTON, ETC. ETC.

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The prices by the dozen are as follows:-

Lancifolium album, pure white,	-	•	-	-	-	84 00
" punctatum (true), with delicate pink spots,	-	-	•	-	-	"9 00
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" rubrum, crimson-spotted,	-	-	-	-	-	4 00
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Eva, distinct, dwarf, rosy lilac spots,	-	-	-	-	-	9 W

Lancifolium, rubrum and roseum, by the 100 or 1000 at liberal rates.

ALSO, THE FOLLOWING FINE LILIES BY THE DOZEN:-

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Very similar to Russell's Prolific in size and quality. Plants, 50 ets. per doz., \$3 per 100.

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A good sized early strawberry, which is said to be productive and profitable. 50 cts. per dozen.

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A real white strawberry, productive, fair sized, and of good flavor. 50 cts. per doz.

GREEN PROLIFIC.

A large and productive variety, light scarlet, and fair quality. 50 cts. per doz.

ALSO,

LUCINDA PERFECTA, with large fruit; PROGRESS, fruit large, scarlet; FROGMORE'S LATE PINE, large and good;

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WHITE PINE APPLE, and DEPTFORD WHITE, \$1 per doz.

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EMPRESS EUGENIE, very large; MARGUERITE, very large; EMMA, WONDERFUL, AMBROSIA, NAPOLEON III., DUC DE MALAKOFF, OSCAR, &c., at 50 cts. per doz.

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One of the largest, finest, and most productive varieties in cultivation; one of the varieties which obtained the \$20 prize. Plants, \$1.50 per 100.

BOSTON PINE.

A large, early, productive, and delicious variety. Plants, \$1.50 per 100.

BRIGHTON PINE, JENNY LIND, AUSTIN, SCOTT'S SEEDLING, and TRI-OMPHE DE GAND, at \$1.50 per 100.

Ready for delivery, August 20th, and safely packed for transportation to any part of the country.

Address,

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DUTCH

BULBOUS FLOWER ROOTS.

We have just received per Steamship Africa, a large and select assortment of the above favorite flowering plants, from one of the most celebrated Florists in Holland, and the same source as those heretofore sold by us, which have given such perfect satisfaction.

The assortment embraces the finest

Double and Single Hyacinths;

Early Single, Double, and Late Tulips;

Polyanthus Narcissus;

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Jonquils;

Crocus, New Varieties;

Crown Imperials;

Iris, English and Spanish;

Snowdrops; Hardy Gladiolus; Scillas;

Japan, and other Lilies, &c. &c.

All the varieties of which were selected by us, and can be relied upon as being of the best description and quality.

Also a fine assortment of

GREENHOUSE BULBS,

COMPRISING

CYCLAMENS, IXIAS, OXALIS, SPARAXIS, TRITONIA, TRITELEA, &c. &c.

Our Descriptive Catalogue, containing full directions for the Cultivation of Bulbs in the open ground and in pots, mailed to all applicants on the receipt of a three cent stamp.

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BUCHANAN'S NEW YELLOW TEA ROSE:

CATHERINE SPRUNT.

A constant and abundant bloomer, with the habit and free-growing qualities of Tea Saffrano--of which it is a seedling—and differing only in the color of flower, which is invariably of a pure deep sulphur yellow.

This is an excellent winter-flowering Rose, and a great acquisition in bouquet making. Strong one year old plants, established in pots, will be sent out at \$2 each; larger plants, \$3 to \$5 each; as soon as subscriptions for one thousand plants are received.

Orders booked and sent strictly in rotation.

ISAAC BUCHANAN, Florist,
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Oct.-2t.

Grape Vines for Vineries.

HOVEY & CO.

Offer for sale one of the largest and most complete collections of Foreign Grapes in the country, embracing every popular variety of merit, all raised from eyes from our own bearing vines, and true to name, as follows:—

Black Hamburgh, Black Hamburgh, Wilmot's No. 16, Black Hamburgh, Wilmot's, Victoria, Mill Hill Hamburgh, White Frontignan, Grizzly Frontignan, Black Frontignan, Chasselas of Fontainebleau, Black Prince, Lombardy, West's St. Peters, Gros Bleu, Barbarossa. Muscat Blanc Hatif, Bowker, Trentham Black. Muscat Hamburgh, Bowcod Muscat, Royal Muscadine, Chaptal. Lady Downes. Moranet. Decandolle.

Canadian Chief, Muscat de Sarbelle, Muscat Madeira. Muscat St. Laurent, Purple Sweet Water, Champion Hamburgh, Muscat of Alexandria, Tottenham Park Muscat, Macready's Early White, Zinfindal White Nice, Reigne de Nice, Syrian, White Tokay, Golden Hamburgh, Pope Hamburgh, Austrian Muscat. Prolific Sweetwater, Caillaba, Richmond Villa, Trebbiana, Marchioness of Hastings, Canon Hall Muscat.

Fine strong vines, one and two years old, in pots, ready for immediate planting.

Prices on application.

53 NORTH MARKET STREET.

Choice Collections of Flower Seeds for 1866. SENT BY MAIL, POST PAID.

For the convenience of purchasers, who are not familiar with the various kinds of flowers, or who prefer not to select for themselves, we offer the following Collections or Assortments all of our own selection; they are composed of the most esteemed and popular varieties, such as are really showy and best calculated for ornamental effect generally. The smaller collections, as the names of some of the species mentioned indicate, consist of very choice first class flowers.

All the collections will be forwarded to any part of the country by mail, post paid, on

receipt of the amount annexed to each, viz.:-

	COLLECTION
No. 1.	20 varieties of the most showy and favorite Annuals, \$1.00
No. 2.	10 varieties of extra fine Annuals, including choice French Asters, mixed; splendid Camellia Balsams, mixed; extra Double German Stocks; se-
	lect large Pansies, extra fine Petunias, &c., 1.00
No. 3.	20 varieties of fine Biennial and hardy Perennial Herbaceous Plants, - 1.00
	20 packets of choice and new Annuals and Perennials 2.00
No. 5.	50 varieties of the most popular Annuals, 2.00
No. 6.	100 varieties of Annual, Biennial and Perennial Flowers, including many
	which are new and choice varieties, 5.00
No. 7.	15 varieties of choice Seeds, suitable for greenhouse and parlor culture,
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AZALEA INDICA.

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Offer for sale a large and superior collection of Chinese Azaleas, comprising upwards of 50 varieties, and including all the choice and new kinds, recently introduced. Our stock embraces such as

Criterion, delicata, Model, Reine des Panachees, President, Rubens, Beauty of Europe, crispifiora, Baron de Vreece, Perfection, Roi Leopold, Gem, Petunæfiora, narcissifiora, Dieudonne Spæ, Comte de Hainault, Brilliant, Imperialis, Azuba, alba magnifica pleno, Rosea-magna, Kinghornii, and many others.

As the Azalea is a speciality of culture, we are enabled to offer fine young stocky plants, and also some of larger size, which may soon be grown and trained into fine specimens for exhibition.

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THE KITTATINNY BLACKBERRY,

After thorough trial, has fully established its superiority over all others, and is so endorsed by the highest authority. This point settled, we offer Amateurs and others a lim-. ited quantity of plants for Fall or Spring planting, at reasonable rates. For further particulars, address, with stamp,

> E. WILLIAMS. Mount Clair, New Jersey.

PRESERVING FRUIT.

We have recently alluded to Professor Nyce's method of preserving fruit, some account of which we gave in a previous volume, and remarked that we should turn to the subject again at the first opportunity. We now add to what we have already said, an account of Professor Nyce's Fruit House at Cleveland, Ohio, as given in the last Report of the Ohio Pomological Society.

Various methods of keeping fruit have, from time to time, been noticed in our volumes, and at least two fruit rooms have been described and engravings of their construction given; one being an English, and the other a French plan. But these did not seem very satisfactory, especially upon a large scale. The Massachusetts Horticultural Society, impressed with the importance of some system, which might be put to practical use, examined some of the plans recommended, and reported upon them, and these reports will be found in our pages.

That much of the interest, which attached to the subject of preserving fruit, is now greatly diminished, there is no doubt. Formerly we had but a limited number of early or late winter pears, and it was important to devise some mode by which those ripening early in winter might be kept in good condition until late in the season. But with the rapid increase of new varieties, and many of them winter pears, which would keep, under the most ordinary care, till February, fruit preserving has been neglected, and instead of attempting to keep the early fall pears, it has been the great object to secure late varieties, whose period of ripening, without much care, would extend over four or five months after the crop was gathered in October, thus bringing the pear to our tables nearly every day in the year.

That some of these plans were capable of doing this has been asserted and partially proved by the inventors; but this was in a small way, only suited to the amateur. For the great objects of sale in the market, they did not appear available, and hence have failed to receive much attention.

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Professor Nyce's method is on a grand scale, and from what we have seen and can learn regarding it, it appears to be not only practicable in a larger or smaller way, but is certain to produce the objects which have so long occupied the attention of cultivators. Grapes and apples gathered last October, and placed in the house, were as sound in July as those just picked from the trees. Some of the specimens we had in May, and others later, and we found them fresh, plump, and full of juice.

To bring the subject before our readers, and especially our pomological friends, we therefore copy the annexed notice of Professor Nyce's plan, and would suggest to our cultivators the propriety of erecting, in the vicinity of Boston, a house similar to that at Cleveland, at least as an experiment, to see in what condition, and how late, fruits may be preserved without losing that delicate flavor which is the peculiar character of each. The following is the Report of the Committee who have examined Professor Nyce's fruit house:

In the tenth report of this Society (1862), p. 29, is a brief description of a plan for the construction of houses for the preservation of fruits, the invention of Mr. Nyce, then a resident of Indiana. Since that time Mr. N., in connection with other gentlemen, has erected a large house of the kind in Indianapolis, and also one in Cleveland, and, it is said, will shortly erect still larger ones in Cincinnati and New York, the plan having been found perfectly successful where tried, and hence likely to be speedily adopted in all the large cities.

An idea of the plan and construction of these houses may be obtained from the following description of the one in Cleveland, which has been visited by most of the members of the committee ad interim of this Society.

The fruit house is located on Kinsman street, about a mile from the park or public square. It was erected a little over one year ago, by Messrs. Nyce, Shirk & Co., and recently (1865) purchased by Messrs. Beckwith & Brockway.

The building is constructed of wood and iron, is about 80 feet in length and 40 feet in width, two stories high, divided into several compartments. The upper story contains ice,

put in every winter, in depth five to six feet. This is separated from the fruit room below by a floor of galvanized iron, the sheets of which are closely riveted and soldered, so as to be perfectly water tight. The walls are made of two casings of sheet iron, 31 feet apart. The edges of these sheets are painted and closely nailed to upright studding, the intervening space being filled with chaff, sawdust, or short shavings, or other non-conducting substances. The floor of the fruit room is also made of galvanized iron. Below this are placed shavings, three feet thick, on a coating of tar and pitch, spread one inch thick upon the ground, to prevent the entrance of moisture. One or more wind-wheels are placed above the roof, geared to fans in the fruit rooms. On the floor of the fruit room was spread formerly, in its dry state. the chloride of calcium, a substance which has great power of absorbing moisture; but now the waste "bittern," from salt works (absolutely costless, excepting freight,) after being dried, is found to be equally as efficient as the former chloride.

The elements of a complete preserving atmosphere are, coldness, dryness, purity, quality of temperature, at all times, and in every part, absence of light, and, if possible, the exclusion of the great agent of decomposition, the oxygen of the air. This plan secures all these elements in great perfection. The thermometer shows a uniform temperature of 34° in all parts of the room, and is found not to vary a single degree from 34° even from April till October.

Dryness is its leading patentable feature. Vapor is constantly given off from different kinds of fruit, amounting usually to at least half a gallon of water from one hundred bushels per week. This vapor is taken up by the absorbent, which is spread over the floor of the fruit room. It is made to run out in tubes to the outside, once in about every month. It is then dried in large pans, of sheet iron, and returned to the house in the dried state as before. The same substance is thus used twenty or thirty times. The air in a room so completely confined, after the fruit is chilled down to 34° becomes very still. The fans are needed to give circulation to the air, and bring the moisture arising from the fruit in contact with the absorbent, to be taken up by it.

The air is pure, because every source of impurity is excluded.

In the gradual ripening of fruit, hydrogen and carbon are constantly given off; the former unites with the oxygen of the air, and forms water; the latter, carbonic acid.

This process in any confined vessel filled with fruit consumes all the oxygen, especially if the fruit be ripe, and the air warm, in about 48 hours. The rooms of this house are gas tight, and when filled with fruit, if closed up for two days, a candle goes out in them almost instantly.

The fruit is then surrounded by an atmosphere composed of the nitrogen of the air and carbonic acid. The former is destitute of all active properties, good or bad. The latter is not sufficiently acid, unless under heavy pressure, to produce any action on fruits immersed in it. Hydrogen and carbon then cease to be evolved from the fruit, as there is now no agent to unite with them, in the same way that they cease to be evolved from a burning candle when the air is removed. Decomposition ceases in both cases, and for the same reason. The principle is thus stated by Liebig: "Decay is much retarded in the absence of moisture, and by the substance being surrounded with an atmosphere of carbonic acid, which prevents the air from coming in contact with decaying matter."

The sources of profit are pears and grapes, kept during the fall and winter months; apples until the months of May, June and July; lemons, oranges, pine-apples, through the summer season; canned fruit, put up in six or ten gallon cans, and retailed out by measure; the fruit when taken from the cans, which are used successively for a number of years, is kept fresh in the house in the open vessel for a number of weeks. Hence this fruit may be sold by measure without loss in the summer months. Oysters, butter and eggs are also sources of profit.

All fruit should be in the house when tree-ripe; that is, as soon as it has received all the virtue the tree or the vine can impart to it. Liebig says: "Rub an unripe or green apple or pear on a grater to a pulp; wash this with cold water on a fine sieve,—the turbid liquid which passes through deposits a

fine flour of starch, of which not even a trace can be detected in the ripe fruit. This after-ripening, as it is called, is purely a chemical process. It is the starch being transformed into sugar; the more starch the unripe fruit contains, the sweeter does it become when ripe."

Although, after the saccharine change, purification may go on slowly at 84°, yet starch is much more slowly changed into sugar at that temperature. In strict accordance with this principle, it is found that the most tender fruits, if put in immediately when made, keep better than the more hardy sorts, if not put in till full ripe. One bushel of apples, if fully ripe, throws off more hydrogen, and forms more water, than three bushels, if put in in the proper season.

It is believed and claimed by the patentee and by all the scientific gentlemen who have examined the subject, that there are but two known modes, for practical use, of drying air: and, as we have already stated, dryness is the leading batentable feature of this house, and the sine oua non of preserving fruit in full health and flavor. One mode consists in throwing the air upon ice, or an ice-cold surface; the other, in forcing it upon absorbents. The principal experiments hitherto have concerned the former method, which is a very imperfect and unsatisfactory one. For by it the air gives up only so much vapor as is in excess of its capacity at 32°. But still as wet as it can be at this ice-cold temper-The absorbents used in Nyce's fruit rooms condense vapor freely from the driest air, even when chilled down to zero, or below it. His fruit house, without absorbents, presents one of the best arrangements to dry air by the first method, as it presents the largest ice-cold surface on its upper part, the place to which the vapor from the fruit, always somewhat heated by the chemical change that produces it, immediately ascends. But experience has clearly shown in this house that present results could not be reached by this method alone, and it would seem, and it is positively claimed, that the plan adopted in the Kinsman street fruit house is the only one which will at once insure a dryness sufficiently uniform and perfect and a constantly equable and adequate degree of coldness.

But people are impatient of theories, and crave results. They wish to know, first of all, how the fruit has kept, and if the experiment is a success, and if the institution "pays."

To these inquiries very hopeful and satisfactory answers can be given. Not more than three or four apples in a hundred, on an average, have decayed thus far in these rooms (15th May.) And there is this peculiarity in the decay of the fruit: When a decayed apple is found, it is universally found totally decayed, and surrounded by fruit not at all tainted by its rot, proving that the defect was already in the apple at the time it was put into the house. The patentee is positive that if an apple has a sound skin at the time it is housed, he can preserve it in full health and flavor, by means of the agents, dryness and coldness, although it very rarely occurs that fruit, apparently sound, has an internal power of decay, over which science has as yet attained no control. But if an apple can be plucked from the tree at the time it has sucked all the virtue which it can draw therefrom, and has a sound skin, Prof. Nyce will put the same in his rooms, and successfully defy it to decay. And this is the great problem now to be solved, to wit: The determination of the precise time when fruit should be removed from the orchard to the preserving rooms. Long years of observation and study, of the habits of the various fruits, must go to the perfection of that man's insight and intuition, so to speak, who shall become master of this difficult science.

The following certificate, dated March 20th, 1855, was signed by a large number of prominent citizens of Cleveland, and published:

"The undersigned, citizens of Cleveland, Ohio, testify that the fruit house erected here by Nice, Shirk & Co. has supplied, at reasonable rates during the last winter, Catawba grapes in sufficient quantity to meet the demands of our citizens. That these grapes are to this day as fresh, plump, and perfect in flavor as when taken from the vine. The bloom is yet on them, and many of the stems are as green as they ever were. We cannot doubt but that they will yet be kept in complete condition for months to come. Our more tender varieties of fall apples, some of which have been out of

the market for months, are firm, crisp and juicy. They have now on hand about 5,000 bushels, embracing the leading varieties of our climate, which some of us have seen to be in the best condition, and from which we expect to be supplied during May, June and July next. We look upon this improvement as a great benefit, as well as an honor to our city. It is, beyond question, a success; and must soon, we think, rank among the prominent improvements of this age, and to the country at large."

· POMOLOGICAL GOSSIP.

FINE PEARS.—The Massachusetts Horticultural Society have just closed their 37th Annual Exhibition, which was held in the new, splendid and commodious Halls in their new building in Tremont Street, an account of which will be found in another page. Notwithstanding the remarkably dry season, the pears were finer than ever before seen, and surpassed in quantity, as they did in quality, any of the exhibitions of late years. No less than 60 entries were made for the prizes for single dishes, and we venture to say that all these lots, not to mention others quite as fine, and in many instances finer, made up a display of pears never equalled anywhere. Duchesse pears weighed 24 ounces each, and 12 Bartletts weighed just 10 lbs. Sheldon, Howell, Doyenné du Comice, Hovey, Beurré Bosc, Beurré d'Anjou, Dix, Beurré Diel, and many others were equally large and superb.

The following are the names of the 20 varieties which obtained the first premium of \$25:

Moore's, Sheldon, Doyenné du Comice, Merriam, Abbott, Swan's Orange, Marie Louise, Beurré Bosc, Bartlett, Belle Lucrative, B. d'Anjou, Golden Beurré of Bilboa, B. Hardy, Hovey (Dana's), Howell, Gansell's Bergamot, B. Superfin, Glout Morceau, Urbaniste, and Andrews, from Hovey & Co.

The collections of pears comprised 160 varieties from Hovey & Co., 115 from M. P. Wilder, and 60 varieties from H. Vandine.

SPLENDID GRAPES.—We continue to chronicle the achievements of the English grape growers, that our own cultivators may see how much they have yet to accomplish before they can surpass, much less equal them, in this department of fruit culture. Some of the specimens of grapes at the 37th Annual Exhibition of the Massachusetts Horticultural Society, just closed, were exceedingly fine, but we believe the largest bunch of Barbarossa, did not exceed 5 pounds in weight.

The Edinburgh International Horticultural Show was held in Edinburgh, the early part of September, and the Gardeners' Chronicle states that it was not only a great success, but as a fruit show, "it stood out prominently in advance of all previous gatherings of the kind." No exhibition which it has been our lot to witness, not even the really grand display which took place some few years since, under the auspices of the Horticultural Society in St. James Hall, could for a moment bear comparison with the Edinburgh Show, in respect to the profusion of high class fruits, under which the tables groaned, thanks to the spirited competition among British gardeners. We copy from the report of the show:—

Among the most interesting exhibitions in the rooms, however, were the collections of "eight varieties of grapes, two bunches each." Here the North and the South were pitted one against the other, in admirable rivalry. Mr. Fowler of Castle Kennedy winning honors tolerable easily against the redoubtable champion grape grower, Mr. Meredith of Garston. Fowler's sorts were Muscat of Alexandria, shown in splendid condition; very well finished Trebbiana and Syrian, weighing respectively, 12 lbs. 91 ozs., and 9 lbs. 62 ozs.; very good Black Gibraltar, excellent Muscat Hamburgh, Lady Downe's, Black Prince, and Black Barbarossa, all fine examples of cultivation, and worthy of unqualified praise. Mr. Meredith had Chaptal, a greenish white sort; Black Hamburgh, extraordinarily finely finished; Muscat of Alexandria, Black Prince, Child of Hale, good Muscat Hamburgh, and Black Alicante. There were other good collections in this class, and Mr. Thompson of Dalkeith was first in four sorts, with Lady Downe's, Muscat of Alexandria, Tokay, and Black Hamburgh. Others in this class were not so fine.

For the heaviest bunch of black Mr. Greensheld had Barbarossa, 10 lbs. 15 ozs. Mr. Meredith had a very fine sample of Hamburgh, in this class, well finished, weighing 4 lbs. 12 ozs. For the heaviest bunch of White, Mr. Fowler had White Nice, 11 lbs., and Mr. Meredith, Child of Hale, 8 lbs. 10 ozs., both wonderful bunches. For the finest flavored white grape, Mr. Thomson had equal, first with Duchess of Buccleugh and Muscat of Alexandria, the former a long slender bunch, with small berries, but exquisitely flavored. There were 14 entries for this prize. For the finest flavored black sort, there were 11 entries, Mr. Fowler being first with Muscat Hamburgh, and Mr. Tilley second with Black Frontignan. sweet flavor in a black grape there was a splendid competition, and singularly enough, an amateur, a tyro in grapegrowing, Mr. Meiklejohn, Dalkeith, was first with Black Alicante, and Mr. Willshire Cavers Carr, second for Hamburgh.

Mr. Meredith showed a very excellent collection of both Hamburghs and Muscats, the former including Richmond Villa, Champion, Old Black, Pope's, Dutch, Mill Hill, Victoria and Wilmots, all extra fine fruited; but the old variety and the Mill Hill were decidedly the best. In Muscats there were the old Escholata, Barnes's, Troveron, Hative de Samur, Tokay, Bowood, Ciotas, and Cannon Hall. The latter and the Escholata having the largest berries, and the Hâtive de Samur the smallest.

Superb pine apples, pears and apples, were also exhibited. Some idea of the magnificence of this exhibition may be formed, as regards the better sorts of fruits, from the number of entries, which extend to 140 in the various classes of grapes, 7 for pine apples, 13 for various collections of fruits, 30 for peaches, 16 for nectarines, and 8 for apricots.

RUSSELL'S PROLIFIC AND BUFFALO STRAWBERRIES.—Some time since we noticed these two varieties, and stated that the berries were so much alike that the best judges could not distinguish one from the other; but that they might yet be distinct, as we had not then the Buffalo vines in condition to compare with the Russell. Since the spring our vines, standing side by side, enable us to say, without any hesitation,

that they are both one and the same sort, and that the two are identical with McAvoy's Superior, well known years ago, as one of the seedlings raised by McAvoy, the late Mr. Longworth's gardener. That such a triple mistake should be made at this late day seems most remarkable. It fully confirms the remark made by Mr. Nelson of Indiana, quoted in our last number, that "ignorance and error, in regard to fruit and fruit culture, still prevail to a discouraging extent."

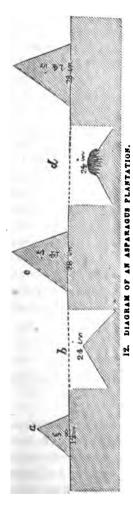
Handsome Pine Apples.—Some very handsome and well grown pines were sent to the Annual Exhibition of the Massachusetts Horticultural Society, from the garden of Governor Sprague of Providence. There were six plants, four of them in fruit, and beautiful cut pines. These made a very attractive show, and added to the fine display. We are pleased to learn that Gov. Sprague is extending the culture of this superb fruit, and now has quite a large number of plants. We have often wondered why gentlemen of wealth did not cultivate the pine, as well as the grape or peach. Certainly there is no richer fruit, and the plants have the additional merit of being highly ornamental, a house of well-grown specimens being scarcely less attractive than a house of ordinary greenhouse plants. We hope to see their cultivation taken up by every one who has the means to devote to the culture of this fruit.

M. L'HERAULT'S MODE OF CULTIVATING ASPARAGUS. FROM THE GARDENERS' CHRONICLE.

It is an essential condition in the cultivation of asparagus that the ground should be completely cleared from all fruit-bearing trees, thickets or woody plants. Excellent results are obtained in a soil of vegetable mould, or one of a sandy, gritty nature; in short, in any light soil free from roots, pebbles, fragments of glass, &c., which may become injurious to the roots of the plants. A calcareous, clayey, or marshy soil will be less productive.

PREPARATION OF THE GROUND.—When a convenient piece of ground has been selected, it is first of all to be mellowed by

spreading on its surface a good dressing of horse or sheep dung (1 cubic mètre per acre = 120 square yards, or 4 perches nearly, or about one-fortieth of an acre.) The low-



est layer of a dunghill, the dregs of grapes, or night-soil are likewise good manures. The ground is to be dug up to a depth of 16 inches in fine weather at the beginning of winter, during which season it is to be left at rest.

In the month of February following, at least as soon as severe frost is no longer to be expected, the ground is to be laid out in furrows and ridges, in order to shape the shelving beds, and the excavations which are to receive the plantations. For this purpose the following operations are to be performed:—

First, there are to be drawn the whole length of the ground, and by preference from north to south, two lines, leaving between them a space of 14 inches, intended for the site of the first half-shelving bed. This half-shelving bed, of a conical shape, and 8 inches in height, is to be made with a spade, hoe, or other convenient implement. Reckoning from the interior base of this half-shelving bed, a distance of 24 inches is to be measured for the first "ground" or trench. The earth taken from it will serve to form the shelving bed. Care ought

to be taken properly to equalize and level the ground. The second shelving bed, which will be a complete one, is to measure 28 inches in width at its base, and 14 inches in height. Next comes the second trench, then the third entire

shelving bed, and so on, until the whole piece of ground has been occupied. Thus, the first half-shelving bed will measure in width 14 inches, and in height 8 inches; the first "ground" or trench in width 24 inches, the second entire shelving bed in width 28 inches, and in height 14 inches, &c. (See the annexed diagram, Fig. 12.)

The earth of the shelving beds being intended to cover over the plants, these beds will gradually diminish in height, and the whole piece of ground will become nearly level at the end of five years, when the asparagus plantation will be in full productiveness.

FIRST YEAR.—The first plantation is to take place during the month of March or April; and should be performed in the following manner:—

In each trench, through its entire length, small holes must be formed about 36 inches distant from each other. These small holes are to be made of a diameter of 8 inches, and about 4 inches deep. In the centre of each of them a small hillock of earth about 2 inches high is to be raised, upon which the asparagus plant is to be laid down, care being taken to divide the roots flatwise in every direction; the roots are to be covered over with half an inch of earth; then one or two handfuls of very good manure are to be added, and covered over with about an inch and a half of earth, at the same, time forming a small hollow of about an inch deep over each plant, to indicate its position. In order properly to know the position of the plants, and to shelter them and their shoots from accidents, a small prop is to be set to each, inclining it at an angle of 45°, in order not to injure the roots.

After the planting has been performed over the whole piece of ground, frequent dressings will be required, in order to destroy the weeds, which are very injurious to the vegetation and growth of the plants. These dressings are to be performed with caution, so as not to cut and injure the small stalks of the young plants since the least injury might lead to their twin.

Every year towards the months of April and May, slugs and snails are carefully to be looked for, while the morning dew remains, and destroyed. Beetles are also much to be feared in the asparagus plantations. Twice every day during a fortnight it will be well to pursue these insects with rods, so as to hinder them from depositing their eggs on the stalks of the asparagus; these eggs appear at the end of three weeks in the shape of black maggots or worms, which prey upon the asparagus stems and dry them up. Yet these insects are not the only ones which are to be dreaded. The white worms (or maggots of tree beetles) are very dangerous, and it will be well constantly to put in use the most proper means to get rid of them, for they eat the roots and destroy the asparagus plants. It will be useful also to lay mole traps, for while tracing their underground roads the moles cut the asparagus roots in order to get through.

Common vegetables, such as beetroot, late potatoes, cabbage, &c., ought not to be planted on the shelving beds; but they may be made useful, only during the first years however, by growing on them ten-week stocks, potatoes, lentils, and such other vegetables as are of little inconvenience from their dimensions.

Another Manner of Planting.—In a moist piece of ground the digging up is to be done to a depth of 20 inches, and the manure to be employed is to contain a little more straw. The ground is to be set out in trenches. The planting is to be done flatwise without shelving beds. Lines are to be drawn by the rule, and the holes to be 40 inches distant from each other. The arrangement of these holes may be quincuncial.

The plantation may be made in the manner already indicated. You may likewise plant upon old beds at a distance of 32 inches, and with a depth of about 7 inches. The plantation may also be made separately or in the vineyards, always observing the directions given for the operation.

In the month of October, during fine and dry weather, whatever may be the sort of plantation, the small stalks of the asparagus are to be cut off at 6 inches above the ground. The ground is to be lightly cleaned, and the shelving beda must be dug up to a depth of 12 inches, maintaining their conical shape.

The asparagus is to be lightly dunged, the plants being laid bare with a flat hoe, for a diameter of 8 inches, and up to the crowns. Proper care ought to be taken not to injure the roots with the implement. On each plant lay one or two handfuls of good manure, free from all noxious substances. While spreading the manure, mark out with a small stick the site of the plants which have failed during the course of the year; these must be renewed in the month of March following.

The manure is at once to be covered over with about 3 inches of the best mellow earth at hand, and over the plants is to be made a small conical hillock about 2 inches high. This operation is the last to be performed for the year.

SECOND YEAR.—In March or April begin by supplying the plants which have failed in the preceding year, selecting vigorous plants a year old, and setting them in the same manner as recommended for the first year. Props are to be placed at the foot of each plant, always at an angle of 45°.

In the beginning of April a first dressing is to be made on the shelving beds, and on the grounds; it will be well to perform this operation the day after a sprinkling of rain, in order the more easy to break the clods. The dressings must be frequently renewed during the whole season, so as to free the asparagus plantation from all weeds and keep it in a perfect state of cleanliness. It is unnecessary to repeat here the precautions to be taken in order to avoid bruising the asparagus with the spade or to secure the destruction of insects.

As soon as the asparagus stems become firm, fasten them to the props, in order to protect them against the wind, which might break them.

In the month of October the dry stalks are to be cut off 8 inches above the ground; the shelving beds are to be turned up, always lightly hollowing out the trenches. The manure prepared is to be spread on the shelving beds, which are then to be dug up. The props having become useless are to be taken away. Lastly, the laying bare of the plants is to be done by taking away the earth, as already directed, up to the surface of the manure. The earth must be mellowed with the

hands, and covered over the plants, to the thickness of a couple of inches, always in the shape of a small hillock.

THIRD YEAR.—In the middle of the month of March [a little later in our climate. Ed.] during fine weather, small knolls, from 6 to 8 inches high, are to be made over each plant, taking nevertheless as a basis the comparative strength of the crowns, more or less large, or of a more or less determined development; those which may be too feeble, or having served the preceding year to supply the bad ones, or those which had failed, are to be covered over with a hillock of only 4 inches high, and should then be left to themselves.

From the other plants, three or at most four asparagus heads may be gathered; but they are not to be cut off with an asparagus knife but removed with the fingers. However, there is a particular sort of knife, square shaped at the end, and having teeth on one side, forming a saw, which will be useful to take away the earth about the stalk, and will make it easy for the fingers to reach the subterraneous stock which care must be taken not to injure.

Asparagus is fit to be cut off when it is about an inch and a half above the surface of the ground, and when it is red, rosy or violet.

With regard to the gathering, one finger must be got behind the asparagus stem at its base, and by bending it, it will easily come off the stock. In this manner all injury to its neighbors, which may easily happen with an asparagus knife, will be avoided; and there will not be left any wounded ends, from which the sap will flow and spread around, occasioning rapid corruption. Care should be taken to close up the hole made for the gathering of the asparagus, and the knoll is at once to be formed anew.

In the month of April, the props are to be again placed and the stems fastened to them in due time. The dressings must be as frequent this year as during the preceding year. After having, in fine weather, done all that is necessary, in the month of October, the dry stalks are to be cut off about 10 inches above the ground, and the dead rubbish thrown out of the plantation. The shelving beds are to be turned up, and the trenches again appropriated. A plentiful digging is to be

made in the following manner: From the whole of the surface of the trenches, and to a depth of 4 inches, the earth is to be taken away and thrown upon the shelving beds; this earth is to be substituted by a layer of very good manure, which layer is to be of a thickness of about an inch and a half, if night soil is made use of, or of about 2 inches if it is only common manure. At the same time a portion of the end of the dry stalks is to be taken away, preserving the nearest to the crown, so as to indicate the exact site of the plants for the fourth year. The object of this operation is to clean the subterranean stocks; it will also give space to the stems which are to shoot forth in the following spring, and will facilitate their growth.

After having spread the manure, the shelving bed must be dug up, and the manure covered with an inch or two of earth; above the very bulbs a small hillock is to be made, over 3 inches thick, reckoning from the subterranean stock. The feeble plants are then to be marked out with a small stick, in order to know them again in the spring.

FOURTH YEAR.—About the middle of March, in dry weather, or the day after a sprinkling of rain, knolls of the height of from 10 to 12 inches must be formed over each plant with good mellow earth. The feeble plants, marked with a small stick at the preceding laying bare, are to be covered over with hillocks of a thickness of from 4 to 6 inches only.

While earthing up the asparagus the ends of the dry stalks are to be taken away. The gathering is to take place from the largest ones during one month at the most. Then they are to be left to run into seed. The most feeble ones are to be spared in order to strengthen them. At the second dressing in the month of May, earth is taken from the shelving beds in order to cover over, to an extent of a few centimetres, the whole surface of the ground, so as to shelter the asparagus plantation from the dryness of the summer. The props being bigger are to be 5 feet high. The dressings are always to be frequent, and to be done during fine weather.

In the month of October the stalks of the asparagus are to be cut off at 14 inches above the ground, and the plantation is to be cleared of the rubbish; manure is to be spread on the shelving beds, which are to be made up from the knolls in the trenches, and are to be dug up to the depth of 16 inches.

Notwithstanding the manure laid upon the shelving beds, the stalks of the asparagus are to be laid bare in the manner already described. Upon the crowns are to be put a few handfuls of good manure, which is to be covered over with 2 inches of good mellow earth; the knolls which are to be formed over the centre of the plants, are to be over 8 inches in height. The means already indicated for marking the feeble plants, to designate them for the next year, are to be followed.

FIFTH YEAR.—The making of knolls on the asparagus is to begin in the month of March; the knolls are to be 14 inches high, and their diameter is to be in conformity with the dimensions of the plants. The ends of the dry stalks, which have been left the preceding year, to mark the site of the plants, are to be taken away; and the feeble ones, which have been marked out at the preceding laying bare, are to be carefully looked to.

The gathering is to consist of the heads on all the large plants, and of some only on the feeble ones; the gathering may last two months at most. In order to get fine asparagus, they are to be gathered once every day, or every other day, or every third day at farthest, according to the degree of temperature. This is the way to obtain rosy, red, or violet asparagus. Under these conditions they will exceed the extremity of the knolls by an inch or two. In order to get green ones it will be sufficient to let them grow during four or five days more; they will lengthen and become green. At all events the red, rosy, or violet color will be the best The second dressings are to be made as in the preceding years. The props are to be put as soon as the necessity is felt, and the stalks, with regard to the increase of their height and weight, must be firmly tied, so that the wind may not disturb them and that they may not be broken.

In the month of October following, the dry stalks are to be cut off at 14 inches above the ground. The plantation is to be cleared, and the shelving beds are to be turned up by raking up the earth of the knolls which have been raised on

the plants for the gathering. Then the manure is to be spread in the manner already indicated; the digging up of the shelving beds is next to take place, and the manure is immediately to be covered over.

SIXTH YEAR.—When the asparagus plantation shall have reached its sixth year, it will then be in full productiveness. The feeble plants, however, must constantly be taken care of, if it is wished to strengthen them. The forming of knolls is to take place in March during fine and dry weather; the knolls must always be 14 inches high, reckoning from the subterranean stock.

Nevertheless, the care to be taken is to be the same as in the preceding year, as well with regard to the knolls as to the props. As for insects, they will be less to be feared than during the first years of the establishment of the asparagus plantation. The beetles can no longer lay their eggs on the stalks of the asparagus, since they are cut during two months, and when they run into seed the time of the laying of eggs is passed.

In the month of October the shelving beds are to be turned up in conformity with the manner shown for the preceding year; the shelving beds and the plants are to be dunged, as has been explained for the fourth year. As the asparagus plantation may last 15 or 20 years, the operations and the care to be taken are to be repeated from year to year in the manner above judicated.

With regard to the asparagus planted on beds or separately, the manure is every year to be spread on the plants alone, observing all the precautions indicated for the cultivation in full beds or the open ground.

Generally, in a well-established asparagus plantation, the gathering, reckoning from its beginning, is to take place during two months, whatever may be the climatal circumstances under which the plantation is placed.

It must have been seen that the expense is not very great; the chief object is the care which must be taken. The main point is to get good plants, in order to obtain good produce. By properly following the rules laid down here, satisfactory results will be obtained.

To sum up: the ground requires manure; the earth must be dug up, mellowed, and sheltered from dryness; and the plants must be kept free from the attack of insects. These are the best means of giving to the asparagus a rich and luxuriant vegetation.

There are to be found three chief varieties of remarkable asparagus, viz., the common one, very fine; the late Dutch asparagus, improved, very large; and L'Hérault's Early asparagus. This last variety, which is very precocious, very productive, and much to be recommended, has been obtained from seed; and from its exceptional size and flavor it has obtained honorable mention and several medals of the first class at the horticultural exhibitions.

FLORICULTURAL NOTICES.

840. CYPRIPEDIUM CONCOLOR Bateman. Self-colored La-DY'S SLIPPER. (Orchideæ.) Moulmein.

A stove plant; growing four inches high; with variegated foliage and yellow flowers; appearing in spring; increased by division of the root; grown in light peaty soil. Bot. Mag., 1865, pl. 5513.

An entirely distinct and very handsome species of the Cypripedium, of a dense habit, with leaves beautifully mottled on their upper surface, and of a rich reddish purple below, contrasting agreeably with the pale primrose tint of the flowers, which are borne on a short hairy scape. It grows freely, is easily managed, and blooms abundantly early in the spring. (Bot. Mag., June.)

841. VELLOSIA CANDIDA Mikau. PURE WHITE VELLOSIA. (Hæmodoraceæ.) Brazil.

A greenhouse plant; growing a foot high; with white flowers; appearing in spring; increased by division; grown in light rich soil. Bot. Mag., 1865, pl. 5511.

A beautiful plant, with pure white lily like flowers, and long slender foliage, like the Tritoma, from the stem of which a single bloom appears, two to three inches in diameter. The genus is a beautiful and singular one, and is yet but little known, the present species being the only one which has yet flowered in England. It is common in the neighborhood of Rio Janeiro. (Bot. Mag., June.)

842. Dendrobium hedyosmum Bateman. Sweet-scented Dendrobium. (Orchideæ.) Moulmein.

An orchideous plant. Bot. Mag., 1865, pl. 5515.

A new species, from Moulmein, with white sepals, and a golden yellow tip, yielding a most grateful perfume, similar to the wall flower. It is a fine plant. (Bot. Mag., June.)

843. ACANTHUS MONTANUS T. Anders. AFRICAN MOUNTAIN ACANTHUS. (Acanthacese.) Western Africa.

A greenhouse plant; growing three feet high; with light purple flowers; appearing in the spring; increased by division of the root; grown in good rich soil. Bot. Mag., 1865, pl. 5516.

A very handsome plant, with the large and fine foliage of the genus, and with tall spikes of pale purple flowers, slightly pencilled with a deeper tint. It was raised from seed received from Western Africa, and, like the well-known A. mollis, is attractive, both from its foliage and blossoms. (Bot. Mag., June.)

844. RAILLARDIA CILIOLATA De Cand. CILIATE-LEAVED RAIL-LARDIA. (Composite.) Sandwich Islands.

A shrubby plant; growing one foot high; with yellow flowers; appearing in summer; increased by layers; grown in light soil Bot. Mag., 1833, pl. 5517.

A remarkable little shrubby compositæ, a native of Hawaii, inhabiting the lofty volcanic mountains of that Island, at elevations of 10,000 feet. It has small narrow leaves, and terminal clusters of yellow flowers. (Bot. Mag., June.)

845. Anemone (Hepatica) Angulosa *De Cand*. Angle-Leaved Hepatica. Hungary.

A hardy plant; growing six inches high; with blue flowers; appearing in apring; increased by division; grown in penty soil. But, , 1868, pl. 5518.

A new and beautiful species of the Hepatica from Hungary, which has been considered by some a variety of A. triloba, but it is very distinct, in the size of the plant, as well as the very much larger and more beautiful flowers. It is a most valuable acquisition, and its introduction will add one of the most desirable of recently introduced plants to our collections. The flowers are nearly two inches in diameter, and of a very deep blue. (Bot. Mag., June.)

General Aotices.

THE HEATH A NATIVE OF MASSACHUSETTS.—In the notice we gave some few years ago, of the native heath which was found in Tewksbury, Mass., by Mr. J. Dawson, and exhibited before the Massachusetts Horticultural Society by Hovey & Co., and which caused much excitement among cultivators, we quoted the remark of Loudon that it was found in Newfoundland. Some botanists doubted, as they have often done, Mr. Loudon's statement, and assumed that no heath had ever been seen on this continent. It appears, however, that they were in error, for it had not only been found some years ago, in Nova Scotia, but in 1864 specimens were gathered at Cape Breton, as will be seen by the following interesting account of this beautiful plant, now considered one of our indigenous plants:

The earliest notice of the Scotch heath as an inhabitant of America is that of Sir William Hooker in Index to the "Flora Boreali-Americana." where it is stated: "This should have been inserted at p. 39 as an inhabitant of Newfoundland on the authority of De la Pylaie." It was supposed, however, that Pylaie had made a mistake, and it was a generally received axiom among botanists that heaths were limited to the Old World. In the year 1861, Prof. Gray of Harvard announced the unexpected discovery by Mr. Jackson Dawson, of heath in Tewksbury, Massachusetts. It was supposed by some that the heath had been planted there, and there is an elaborate paper by Mr. Sprague in the Boston N. H Society's Proceedings, in which it is strongly argued that no native heath had ever been found in Newfoundland or on the American continent. In November, 1863, at the sale of the Linnean Society's collections, in London, Mr. Watson bought a parcel of plants in which were found two flowerless branches of Calluna vulgaris, identical with the heath of the British Moors, and labelled "Head of St. Mary's Bay-Trepassey Bay, also, very abundant. S. E. of Newfoundland, considerable tracts of it." Evidence thus seemed to accumulate, but was still imperfect. In the city of Halifax there is a common but mistaken belief that there is plenty of heather at Point Pleasant and the Northwest Arm, but all the specimens that have been collected have proved on examination by botanists to belong to other plants and not to the heath family. However, in September, 1864, Dr. Lawson obtained specimens of the genuine heather in swampy ground on Ulston Farm, St. Ann's, Cape Breton, where it has been known by the proprietor, Mr. Robertson, for about ten years. The plant is quite wild, and native. Soon afterwards it was announced that Mr. Richardson, who was making a geological survey of Newfoundland, had found heather there. And lastly, during the present summer, a young lady brought to Dr. Lawson's botanical class, a specimen of Culluna vulgaris, (agreeing in every respect with the Scotch and Cape Breton plant,) which had been collected on the Dartmouth hills in 1850. There is now, therefore, ample evidence that Scotch heather grows, as an indigenous plant, in Massachusetts, Nova Scotia, Cape Breton, and Newfoundland; but is extremely local in its distribution, and in fact one of our rarest plants. Wherever a patch of heather. grows, the proprietor should fence it in, and preserve it carefully, otherwise we are apt to lose the plant, and with it one of the claims of our Province to its cherished name of Nova Scotia. English and American botanists will hear with much interest of the Dartmouth habitat, as it serves in some measure to connect the Massachusetts one with those of Cape Breton and Newfoundland, which latter, on the other hand, connects (distantly) through Greenland, Iceland and the Azores with the great heath ceptre of Northern Europe. We have a patch of the heather from Cape Breton, and find that it grows well in the flower border.

TRITONIA CROCATA. This is now rather an old plant, but few, if any, new plants in its way are so useful for conservatory decorations. That many old plants now lost or neglected are far better than those frequently introduced with high praises and higher prices, is a mere truism among gardeners, but I confess to having oftener looked for these "good old things" than to have found them. However, at Cliveden a short time since, I had a very "lucky find." There, in a long span-roofed house-something between greenhouse and intermediate house-a most brilliant and novel effect was produced by a number of plants of Tritonia crocata in 48-sized pots. The plants were placed at intervals of a few feet, along the edge of either bench, a few inches from the front and behind the small row of dwarf flowering plants that ran along it. From each small pot sprang about a dozen branched flower-spikes, and of these the heaviest laden and fullest in flower fell over and below the front edge of the bench; others were drooping horizontally, and some were nearly erect, so that the passage straight through the house was most gracefully fringed with flowers of a brilliant orange scarlet-almost as effective a color as that of Tulipa Gesneriana. The individual flowers too are large, and altogether the plant is more desirable than any of its order that I have seen used for greenhouse ornament. It is a great favorite with Mr. Fleming for basket and drawing room embellishment, and droops over the edges of vases, &c., very gracefully and effectively. This Tritonia is readily forced, "and my be had in flower six months of the year." The plants seem to have been cultivated in the simplest manner. They are annually shaken out, after going to rest, and 10 or 12 bulbs replaced with the fresh soil in 48 sized pots. Being of easy propagation a stock will not take long to get, and that accomplished, say to the extent of from 20 to 100 pods, according to the wants of the conservatory, the gardener will find that he has a valuable and distinct subject for its decoration. I may add the flower stems were not staked, and that the plants are grown in cold pits when not in flower or required for forcing.—(Gard. Chron.)

Massachusetts Horticultural Society.

Saturday, June 3d.—The following members were elected at this meeting: John R. Hall, Mark W. Pray, Ephraim W. Bouve, Charles H.

Smith, Samuel Butterfield, Elbridge Farmer, Edward H. Bennett, John Capen, D. B. Hager; Stephen G. Deblois, Charles F. Gerry, Abner Kingman, Herbert M. Warren, James M. Warren, William Bacon, Jr., Augustus Bacon, Granville Bacon, Franklin L. Goldsmith.

July 1.—The stated quarterly meeting of the Society was held to-day,—
the President in the chair.

A Committee was chosen to take into consideration the unprecedented depredations of the canker worm, and report what measures ought to be taken to preserve one of our most valuable fruits. W. C. Strong, J. F. C. Hyde, Parker Barnes, E. Wight, and E. A. Brackett were nominated and chosen.

On motion of B. Harrington it was voted that the Building Committee have full power to make all necessary arrangements for the dedication of the new Hall.

A copy of Burr's Vegetables of America was presented by the author, and the thanks of the Society were voted for the same.

Adjourned two weeks, to July 15.

July 15.—An adjourned meeting of the Society was held to-day,—the President in the chair.

On motion of C. O. Whitmore it was unanimously voted that the Treasurer be authorized to issue notes for obtaining funds for the completion of the new Hall, provided the same shall not exceed \$30,000.

Adjourned two weeks, to the new Hall in Tremont Street, August 5.

August 5.—An adjourned meeting of the Society was held to-day, at the Society's new Hall in Tremont Street,—the President in the chair.

The President addressed the Society, congratulating the members on the near completion of the building, and welcoming them to the first meeting.

Adjourned four weeks, to September 2.

DEDICATION OF THE NEW HALL.—The new and splendid building of the Society in Tremont Street having been completed, and ready for occupation, the dedication took place on Saturday, September 16. The Order of Exercises was as follows:

Music by the Germania Band.

Prayer by the Rev. Dr. Huntington.

Address by the President, C. M. Hovey.

Original Ode, by John Owen of Cambridge, sung by Ball's Quartette Club.

Benediction.

The Hall was beautifully decorated for the occasion. On either side of the rostrum were superb specimens of Thujopsis borealis, and numerous bouquets in tall and elegant vases. In front were stately Palms and Yuccas. Smaller bouquets ornamented the desk of the speaker, and overhead was suspended a huge basket of flowers, arranged with most exquisite taste, forming a fountain of beauty and loveliness, whose fragrance filled the Hall. Delightful music was discoursed by the Germania Band.

The services were held in the large or main Hall, which was completely filled with the members of the Society and their ladies, and many invited guests. Among those, upon the platform, with the President of the Society, were His Honor F. W. Lincoln, Jr., Mayor, Hon. A. H. Rice, Hon. Anson

Burlingame, Minister to China, Hon. M. P. Wilder, Ex-President, Profs. J. L. Russell, Asa Gray, and Jeffries Wyman of Cambridge, Hon. Stephen Fairbanks, Hon. Joseph Breck, Dr. Jacob Bigelow, Judge Putnam, Vice-Presidents J. F. C. Hyde, C. O. Whitmore, H. H. Hunnewell, and W. C. Strong, and others.

It would not be possible for us to give even a synopsis of the Address, which was, in the main, a historical account of the progress of horticulture in this country, and allusions to those who had done so much for gardening, especially to such illustrious pioneers as Lowell, Quincy, Welles, Pickering, Sullivan, Preble, Guild, and others. The closing remarks were as follows:—

To attempt in your presence to eulogize the pursuit of horticulture, in which so many of you are engaged, and in which you have experienced so much delight, would be an idle waste of time. To refer to the production of new fruits and new flowers, so rapidly augmented of late years, by the now well-known and reliable process of hybridization,—to the various modes of propagation, now so well understood by skilful men, to the cultivation, systems of pruning, &c.,—or to their relative value for the market or garden, would be at the risk of tiring your patience. You have witnessed the exhibitions of the Society, weekly, monthly, annually, year after year, and are undoubtedly familiar with our fruits and flowers, and have yourselves added, by your own skill, to the long catalogue, many varieties, whose acknowledged beauty and superior quality have enriched every garden and given value to every orchard.

If through a period of more than thirty years, you have by your devotion to the great purposes of the Society, followed it from place to place, cheered and encouraged by its onward progress, until it has reached the elevated position it now holds, how great must be your delight, and what deep emotions of gratitude spring up in your hearts, that you have found a permanent home. In the contemplation of the past, as well as in the anticipations of the future, how much there is to awaken in us renewed feelings of joy, exultation and pride, not in a vain or arrogant spirit, but humbly thankful that through the course of so many years, unvarying success should have attended your labors, harmonious action governed your deliberations, and a judicious administration of your affairs enabled you to erect this costly and beautiful edifice.

But let not this prosperity decrease your ardor or lessen your labors in your favorite pursuit. Rather let it rekindle and fire your zeal for new conquests. Your duties and responsibilities have increased with your growth. If you have pulled down that you might build greater; if you have grasped the prize of a life-long ambition; let not this result satisfy you. If you are the possessor of a garden filled with beautiful trees or shrubs to which you may retire from the turmoil of the crowded city, and among whose sylvan shades take your daily walk, making them your companions and friends, come hither often with branch or flower, or berry, to inspire the same delight in others. Or if you are only the owner of a little spot of ground, filled with the choicest flowers, whose constant nurture has occupied the moments snatched from life's busy scenes, and whose opening

blossoms are daily eloquent with lessons of grace and loveliness—do not refuse to offer them here as tokens of your affection and triumphs of your art.

And if neither tree or flower or fruit can yet claim your care, will not the recollection of youth's golden hours, when gathering the first snowdrop of spring, or the last aster of autumn, touch as with a vibrating chord, that latent love for nature, which few do not possess, awaken inspirations for things beautiful, and bring you into sympathy with the objects of our association.

We'come then to us be this Temple of Flora; here come and bring your lovely flowers, gathered, it may be, fresh from the dewy fields and pastures, or plucked in early morn in the cultivated border, the choicest offerings of your tasteful care, arranged in innumerable forms and sparkling with colors of every hue. From these walls may ever irradiate that spirit of beauty which shall not only draw within your extending circle every lover of Nature or Art, but whose glorious effulgence shall not be dimmed until the whole world becomes a garden.

Annual Exhibition.—The 37th Annual Exhibition was held in the new Hall of the Society, commencing on Tuesday, September 19, and continuing till Friday evening the 22d.

We shall not attempt to give a detailed account of this the grandest display the Society has ever made. We should have no space for other matter should we attempt so to do. The beauty of the Halls needs no encomium, and this was not marred by unnecessary decoration. In the large or main Hall there were three tables, 80 feet long and 6 feet wide, running the whole length, with a table on each side against the wall, for cut flowers. The outside tables of the three were filled with pears, and the centre table with plants, comprising a selection of all the choicest variegated-leaved plants, intermixed with palms, yuccas, rhopalas, and other noble specimens of tropical vegetation. The stage, or platform, was fitted up with two tables, one of which was filled with beautiful flowering plants, and the other with begonias and ferns. A semicircular table in front was filled with choice bouquets of various styles, and in front of that, peaches and pears. The anterooms and lobbies were also filled with fruit.

The lower Hall (50 feet long) was arranged with five tables, two on the sides, and three in the intervening space, the centre one of which was filled with apples and grapes, and the others with fine vegetables. The platform was filled entirely with huge coxcombs, coniferous plants in pots, and miscellaneous plants. At the entrance, at the head of the noble flight of marble steirs, were arranged on either side two huge Araucarias, standing like bristling sentinels to guard the domain of Ceres.

The attendance was very large, and the Halls were literally packed with an appreciative and brilliant audience during the entire exhibition. The Germania Band was in attendance every evening, and added no little, by their delightful music, to the pleasure of the numerous visitors.

Our account of the plants, fruits, &c., must be much briefer than we could wish, for there were numerous specimens deserving of particular note. We can only mention the names of the most prominent.

PLANTS IN POTS.—These numbered upwards of 300, many of them of. immense size, and mostly very large. From the Botanic Garden at Cambridge came a fine collection, comprising Rhopala Jonghei, nearly 10 feet high, Latania borbonica, Strelitzia augusta, Pandanus javannicus variegata, Cyanophyllum magnificum (6 feet), Thrinax dactilifera, six Caladiums, among which were Belleymei, pictum, hastatum, and the beautiful Chantini; several ferns, including fine examples of Asplenium Billanderé, Alsophila australis, and Asplenium nidus, and a handsome Coleus Verschaffeltii, and many other plants. From Jona. French, some well-grown Caladiums, especially Belleymei, Wightii, Chantini, and argyrites; two very fine Cissus discolor, trained as pyramids; a Coleus Verschaffeltii, Pandanus, Dieffenbachia, &c.; six elegantly grown ferns, among them Pteris serrulata, Davalla elegans, Adiantum cuneatum, and Pteris cretica albo lineata: six large Begonias, and other plants. From Hovey & Co., 15 Caladiums, including Hastatum, Chantini, Belleymei, Argyrites, Wightii, Barraquini, Broigniartii, Newmanii, &c.; a superb Chinese Palm, Bonapartea juncea, Musa Cavendishii, Yucca aloifolia variegata, Maranta pulchella, Wigandia carracasana, Pandanus, two Latania borbonica, a Coleus, Rhopala corcovadensis, 10 feet high, Dracena terminalis, gracilis and braziliensis; 12 Ferns, among them Pteris tricolor, and P. tremula, and Polypodium aureum; six Fuchsias, two very large Thujopsis borealis (8 feet), the rare and elegant Hibiscus Cooperi, and many other plants. W. T. Merrifield of Worcester sent a superb Ananassa Sativa var. in fruit. Rhopala Jonghei, Pandanus, the variegated Aloe, Crotons, Marantas, Pavetta borbonica, several Caladiums, Begonias, and several Ferns. W. C. Strong furnished a pretty collection of small plants. J. McTear, a variety of Ferns, plants in bloom, Gloxinias, &c. From F. Parkman, all the new Japanese Evergreen trees, in pots, such as the Retinosporas, Thujopsis dolabrata var., a very pretty collection of small specimens. From H. H. Hunnewell, two grand specimens of Araucaria imbricata, about 10 feet high, and many other plants. Gov. Sprague of Providence sent six pine apples, in fruit, all well-grown and handsome specimens.

BOUQUETS AND BASKETS OF CUT FLOWERS.—These were more numerous than usual. From Hovey & Co. came two immense bouquets, for the Society's vases. Hand and table bouquets, of various styles, were shown by J. Nugent, M. P. Wilder, J. McTear, H. Grundell, W. C Strong and Wm. Wales; some of these were very beautiful. Baskets of flowers were contributed by Misses Pierce, Kenrick, Westgate, Russell, Chase, and others, some of them most tastefully arranged. Some wreaths, crosses, anchors, &c., contributed to make this department very interesting.

CUT FLOWERS.—The dry weather has been so severe that these were not up to the usual standard; in fact there was a scarcity, and some of the stands were rather inferior, but among them were superb Gladiolus and Asters. Messrs. Hovey sent a very large collection of splendid Asters, with a variety of other flowers; Mr. Wheeler, a collection of very fine Double Zinnias; W. C. Strong, J. E. Westgate, Jos. Breck, F. Parkman,

E. Wason, J. McTear and Geo. Craft, contributed cut flowers in variety. James Barrett sent a large collection of native flowers.

Dahlias were inferior; a few good specimens came from Hovey & Co., but there was scarcely any competition for the prizes.

PREMIUMS FOR PLANTS, FLOWERS, &C.

PLANTS IN POTS.—For the best collection of twenty, to the Botanic Garden, Cambridge, \$25.

For the next best, to W. T. Merrifield, \$20.

For the next best, to Hovey & Co., \$15.

For the next best, to W. C. Strong, \$10.

SPECIMEN PLANT.—For the best, to the Botanic Garden, for Rhopala Jonghei. \$5.

VARIEGATED LEAVED PLANTS .- For the best, to Jona. French, \$10.

For the next best, to Hovey & Co., \$8.

For the next best, to W. T. Merrifield, \$6.

GLOXINIAS.—For the best, to J. McTear, \$6.

CALADIUMS.—For the best 6, to Jona. French, \$8.

For the next best, to Hovey & Co., \$5.

FERNS.-For the best 12, to Jona. French, 88.

For the next best, to the Botanic Garden, 86.

For the best 6, to H. H. Hunnewell, \$5.

For the next best, to J. McTear, \$3.

MARANTAS .- For the best, to the Botanic Garden, \$5.

For the next best, to W. T. Merrifield, \$3.

Plants in Bloom .- For the best, to J. McTear, \$6.

BEGONIAS.—For the best, to Jona. French, \$5.

For the next best, to H. H. Hunnewell, \$3.

FUCHSIAS.—For the best, to Hovey & Co., \$3.

VARIEGATED PLANT.—For the best, to Jona. French, for Cissus discolor, \$5.

For the next best, to Botanic Garden, for Pandanus variegatus, \$3.

COXCOMBS.—For the best, to Geo. Leland, \$3.

Dahlias.—For the best 24 blooms, to Hovey & Co., \$5.

For the next best, to W. C. Strong, \$4.

For the next best, to C. J. Power, \$3.

CUT FLOWERS .- For the best, to W. C. Strong, \$16.

For the next best, to J. Breck, \$14.

For the next best, to J. E. Westgate, \$12.

For the next best, to \$10.

For the next best, to \$8

For the next best, to J. McTear, \$6.

PARLOR BOUQUETS.—For the second best, to W. C. Strong.

HAND BOUQUETS .- For the best, to H. Grundell.

For the second best, to J. Nugent.

LARGE BOUQUETS.—For the be t, to Hovey & Co., \$12.

Numerous gratuities were awarded for plants, flowers, bouquets, &c.,

among which was one of \$10 to H. H. Hunnewell, for two magnificent specimens of Araucaria imbricata.

FRUIT .- The show of fruit was unprecedented. Dry as the summer has been it seemed to make no difference in the magnificence of the specimens. Better pears, or at least in such quantity, were never before exhibited at one time. Under all the adverse circumstances of the season, no better evidence is needed of the zeal and energy of our cultivators in the growth of this fruit, and their determination to bring it up to the highest standard. The competition for the large collections was perhaps not quite so great as the last year, but for the smaller collections and single dishes, which come within the reach of amateurs, it was very great. There were no less than 62 competitors for the single dishes, 19 more than last year. Of course any attempt to do instice to the fine specimens would require more space than we have at our command; but we cannot omit to notice a few of the grand specimens of pears. These were the Duchesse, from T. Groom, J. Nudd, J. C. Chase, and J. Halev; the Beurré Bosc of Messra. Nudd, Dickinson, C. N. Brackett, J. Eaton, and J. Stickney; the De Tongres of Messrs. Nudd, Haley and Butterfield; the Howell of J. Eaton and M. P. Wilder; the Dix of Mr. Dickinson; the Beurré Diel of Messrs. Dickinson and W. Gray, Jr.; the Sheldon of Dr. Fiske and Hovey & Co.; the Louise Bonne of Messrs. Davis and De Wolf; the Seckel of Dr. Fiske; the Dovenne du Comice of Hovey & Co.; the Bartlett of Hovey & Co. and Dickinson; the Beurré Superfin of Mr. Clapp; the Marie Louise of J. Savage; the Glout Morceau of Mr. Dickinson and De Wolf; the Beurré Hardy of Hovey & Co.; the Lawrence of Mr. Leavens; the Hovey (Dana's) of Vandine and Hovey & Co. were shown as a large pear,-all of most remarkable growth, the 12 Bartletts of Mr. Dickinson weighing 10 pounds, and one of the Duchesse of Mr. Groom weighing 24 ounces.

Grapes were not so good as last year, yet some of the specimens were extra, and nearly all fully ripe. Messrs. Davis & Bates had a beautiful show of 10 varieties of native sorts, among which were the Adirondac, fully ripe, the Rebecca, Allen's Hybrid, Union Village, Crevelling, Delaware, and others. This collection most deservedly obtained the highest prize, for the variety as well as the perfect condition of the grapes. Two bunches of Iona were sent by E. A. Brackett. Among foreign grapes were some fine specimens, particularly the Bowood Muscat and Cannon Hall, in the collection of Mrs. Durfee, which carried off the prize, establishing the reputation of Mr. Young as the Meredith of our cultivators. Buckland Sweetwater, from H. H. Hunnewell, were the best of this fine sort yet exhibited here, and remarkably well grown, good size bunches, and very large berries; his Bowood Muscats were also extra. Mr. Rogers sent very superb Barbarossa, which his gardener, Mr. McGee, cultivates with so much success. We hope to see 10-pound bunches another year.

Of apples the show was limited; Messrs. Clapp and Clement were the principal exhibitors, and their specimens were, as usual, excellent. Peaches were few, but good, and added to the beauty of the display.

The collections of pears, for which prizes were offered again this year, were large and very fine. Messrs. Hovey & Co. had 160 varieties, including several new sorts, and Hon. M. P. Wilder 115 varieties, also containing some new kinds. Mr. Vandine had about 50 varieties, which comprised those exhibited in this class. We counted upwards of 1100 plates of pears, most of which contained 12 specimens each, or more than 100 bushels! These came from about 100 contributors, and we can only give this aggregate of the Exhibition.

Prizes were awarded as follows:

AWARD OF PREMIUMS FOR FRUITS.

PEARS.—For the largest and best collection, of 165 varieties, to Hovey & Co., \$40.

For the second best, to Marshall P. Wilder, \$30.

For the best twenty varieties, to Hovey & Co., \$25.

For the second best, to Davis & Bates, Cambridgeport, \$20.

For the third best, to M. P. Wilder, \$16.

For the best fifteen varieties, to J. C. Chase, Cambridgeport, \$15.

For the second best, to William Crafts, Roxbury, \$12.

For the third best, to J. Stickney, Watertown, \$10.

For the best ten varieties, to J. Nudd, Cambridgeport, \$10.

For the second best, to J. B. Kendall, Somerville, \$8.

For the third best, to A. Dickinson, Cambridgeport, \$6.

For the best five varieties, to J. B. Loomis, Chelsea, \$6.

For the second best, to E. Wason, \$5.

For the best twelve Bartlett, to J. Eaton, Cambridgeport, \$5.

For the best twelve Beurré Bosc, to J. Nudd, \$5.

For the best twelve Seckel, to J. C. Chase, \$5.

For the best twelve Swan's Orange, to E. Wason, 85.

For the best twelve Louise Bonne, to Davis & Bates, \$5.

For the best twelve Urbaniste, to A. Dickinson, \$5.

For the best twelve Duchesse, to J. C. Chase, \$5.

For the best twelve Beurré Diel, to A. Dickinson, \$5.

For the best twelve Beurré d'Anjou, to J. C. Poor, Somerville, \$5.

For the best twelve Sheldon, to Dr. R. T. P. Fiske, Hingham, \$5.

For the best twelve Beurré Superfin, to F. Clapp, Dorchester, \$5.

For the best twelve Dovenné du Comice, to Hovey & Co., \$5.

For the best twelve Glout Morceau, to A. Dickinson, \$5.

For the best twelve Belle Lucrative, to William Gray, Jr., \$5.

AFFLES.—For the largest and best collection, to F. Clapp, \$25.

For the best five varieties, to W. A. Crafts, \$6.

For the second best, to J. B. Moore, \$5.

For the third best, to James Eustis, 84.

For the best twelve specimens, to J. B. Moore, 25.

For the second best, to F. Clapp, \$4.

For the third best, to George Pierce, \$3.

PRACHES.—For the best collection, to Asa Clement, \$5.

For the third best, to Francis Dana, \$2.

GRAPES, (Foreign.)—For the best three bunches Black Hamburgh, to R. W. Turner. \$5.

For the second best, to Mrs. T. G. Ward, \$4.

For the best 3 bunches of any other black sort, to Mrs. T. G. Ward, \$5. For the second best, to R. S. Rogers, \$4.

For the best two varieties, two bunches each, to Richard S. Rogers, \$5.

For the second best, to E. H. Luke, \$4.

For the third best, to C. E. Grant, \$3.

For the fourth best, to John S. Pierce, \$2.

For the best collection, six varieties, to Mrs. Durfee, \$10.

For the second best, to R. W. Turner, \$8.

For the third best, to H. H. Hunnewell, \$6.

GRAPES, (Native.)—For the largest and best collection, to Davis & Bates, \$15.

For the next best, to W. C. Strong, \$10.

For the best six bunches of Delaware, to Stephen M. Weld, \$4.

For the best six bunches of Isabella, to C. E. Grant, \$4.

For the best six bunches of Concord, to J. B. Moore, \$4.

For the best six bunches of Rebecca, to Geo. B. Cutter, \$4.

For the best six bunches of any other, to E. A. Brackett for Iona, \$4.

GRATUITIES FOR PEARS.—For large collection, to Henry Vandine, \$15. To Seth W. Fowle, \$9. To A. Beal, C. N. Brackett, G. W. Ireland, J. H. Smith, Samuel Sweetser, \$5 each. To Henry L. Chase, Horace Partridge, Warren Heustis, \$4 each. To John C. Park, John Savage, Jr., J. H. Fenno, John D. Dodges, Mrs. E. P. Bancroft, J. S. Sleeper, \$3 each. To Geo. B. Cordwell, J. P. Rand, G. A. Godbold, E. V. Monroe, E. Wason, G. W. Wason, W. E. Coffin, Wm. T. Hall, Josiah Crosby, J. A. Kenrick, Charles H. Gallup, \$2 each. Several other gratuities were awarded of \$1 each.

GRATUITY FOR APPLES .- For collection, to Asa Clement.

GRATUITIES FOR GRAPES.—For collection. to G. W. Harding, \$4. To Anson Dexter, \$2. To Francis Dana, R. T. P. Fiske, C. F. Gerry, Dr. A. Torrey, Oliver Bennett, Stephen M. Weld, \$3 each. To Mrs. S. R. Johnson, B. C. Vose, J. H. Sanborn, \$2 each.

VEGETABLES.—The display of vegetables was remarkably good, and the excellent opportunity for arrangement in the lower Hall, added greatly to the attraction and interest in this department. The contributions were numerous, and the specimens of cabbages, squashes, sweet corn, and tomatoes, large and superior. The Hubbard Marrow, Turban, Yokahama, and Canada Crook Neck, from 12 exhibitors, were all fine, and true to name. Three Marblehead Drumhead cabbages weighed, respectively, 27, 24, and 23 pounds. Sweet corn had 16 rows on many of the ears. Two Mammoth squashes weighed, each, 132 and 105 pounds. Cook's Favorite, Tilden, and Valencia tomatoes, were fine specimens of these new and excellent sorts. We cannot attempt an enumeration of the various contributions, and must refer to the report, when ready, for the details, as well as the list of premiums.

Horticultural Operations

FOR OCTOBER.

FRUIT DEPARTMENT.

The continued dry weather is unprecedented, and trees and plants of all kinds are suffering severely for the want of moisture. Where this has not been at command, fruits of all kinds are small, and the trees have already, in many places shed their leaves. There is one compensation, the early growth, what there was has been thoroughly ripened, and a severe winter, should it occur, will not be likely to injure them.

Vines, in the early houses, will now begin to break, and will require much attention. Syringe morning at d evening, until the buds are all well started, and maintain an even but not high temperature, which can easily be done at this season with only slight fires at night. Before the weather gets frosty cover the border with three or four inches of strawy manure. As the shoots advance keep them tied in, and allow an abundance of air in all favorable weather. Vines in the greenhouse and grapery, now at rest, will require but little attention. To secure thoroughly ripened wood is the great object. Vines in cold houses will now have their crop fully mature, or partially cut, and, as there are no means of heating, the house should be closed early in cold evenings to retain the sun heat, and preserve the fruit as long as possible. Hardy grapes may now be partially or wholly pruned, and got in readiness to lay down for the winter, next month.

STRAWBERRY BEDS should continue to receive attention. Owing to the dry weather in this neighborhood new beds have done poorly. Now is a good time to fill gaps where they have died. Keep all weeds down, as this month, if there is rain, a vigorous growth will be made. Prepare ground for spring planting.

ORCHARD-HOUSE TREES should be very sparingly watered, in order to ripen the wood, and they must be protected from such frosts as will harden the soil. Keep them in a sunny spot, and cover the pots with leaves.

PEAR TREES may be transplanted as soon as the leaves fall.

CURRANTS AND RASPBERRIES may be transplanted this month.

FLOWER DEPARTMENT.

No frosts of any severity have yet occurred, but no time should be lost in protecting all plants. Frames are best for keeping young stock until the weather is too severe. Take up and pot all kinds of plants wanted for winter blooming. Attend to the storing of soils for winter use. Use as little fire heat as possible, until it is actually required, as plants do better than when coddled in the early part of the winter. A temperature of 40° to 45° at night will do, unless plenty of flowers are wanted.

CAMBLLIAS should have an occasional syringing, and moderate waterings at this season.

AZALEAS, unless wanted for early blooming, should be put into the coldest part of the house. Attend now to staking and tying the plants into shape. Water sparingly.

CHRYSANTHEMUMS should be liberally watered, using liquid manure, or guano, freely. Keep in a rather dry, airy place.

PELARGONIUMS, repotted last month, should now have a place near the glass, and be kept cool, and rather dry.

Roses, taken up from the open ground, should be placed in a frame for a few weeks, shading from the hot sun, till established.

Points attrias, and other plants, requiring heat, should have a good place in the warmest part of the house.

SWEET ALYSSUM, and other annuals, for winter flowering, should be potted and kept in a cool frame.

HYACINTHS, and other bulbs, may be potted for early blooming in the house.

Callas should have plenty of water, and a good sunny place.

IXIAS AND SPARAXIS should be potted.

Oxalis should be potted, if not already done.

LILACS, of various kinds, may be potted for early blooming.

PANST SEEDS may be planted now, for blooming in the spring.

HEATHS should be kept in a cool, airy part of the house.

CACTUSES should be more sparingly watered, except the Epiphylless truncatum.

Calabiums should now be allowed to dry off, and the tubers wintered, dry and warm.

FERNS should be more sparingly watered, and have a warm place, free from draughts of air.

DRAGENAS, and similar plants, will now have made their growth, and unless there is plenty of heat, should be kept rather dry.

· MONTHLY CARNATIONS should be potted, and placed in a cool house, near the glass.

FLOWER GARDEN AND SHRUBBERY.

Continue to keep the lawn and walks in good order, sweeping, raking and rolling often. Nothing adds more to the comfort of the garden than nice, clean, hard walks.

HYACINTH and other spring bulbs, may be planted now.

JAPAN and other lilies may be taken up and reset.

PRONIES may be transplanted.

HERBACEOUS PLANTS, of all kinds, may be taken up, divided, and reset.

GLADIOLUS should be taken up before severe frosts.

Dahlias should be dug up and removed to the cellar, out of the reach of frost.

CARNATIONS should be taken up and reset, or potted and kept in a frame.

HALF-HARDT PLANTS, such as Tritomas, Agapanthes, &c., should be taken up and removed to the greenhouse, or a cool cellar.

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FRINCE DE LIGNE.

No. CCCLXXI.

NOVEMBER, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMERICA.

HONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFORD, WORDESTER, ROCHESTER, BUFFALO, CLEVELAND, WILMINGTON, ETC. ETC.

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Thalia, spotted with ruby,	•	-	-	-	-	9 00
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Lancifolium, rubrum and roseum, by the 100 or 1000 at liberal rates.

ALSO, THE FOLLOWING FINE LILIES BY THE DOZEN:-

ALSO, THE FULLOWING FIRE LILIES BI THE DU	LEN :	_		
L. Brownii, a superb white flower, trumpet-shaped, six inches long,	-	-		12 00
Eximna, true, very large trumpet-shaped white flowers, -	-	-	-	4 00
Groom's Hybrid, with deep blood-colored and spotted flowers,	-	-	-	5 00
Superbum, a splendid lily, red and orange-spotted, six feet high,	-	-	-	4 00
Candidum, the old white lily,	-	-	-	2 00
Longiflorum, with very large white trumpet-shaped flowers,	-	-	-	2 00
Tigrinia, (Tiger lily.)	•	-		1 50
Martagon, various colors,	-	-	-	4 00
Chalcedonicum, with small scarlet flowers,	-	-	•	4 00

Bulbs ready for delivery October 10th.

The months of October and November is the best season for planting these Lilies in the open ground. For cultivation in pots, they should be planted at the same time, and be wintered in a frame, protected from severe frosts, or they may be kept dry till February and then potted. They will then bloom beautifully in July and August. No plants of recent introduction are more valuable than the Japan Lilies.

Aug.

BRENCHLYENSIS. CLADIOLUS

TO THE TRADE.

HOVEY & CO.

Offer for sale a large stock of sound, healthy bulbs of this showy Gladiolus, the finest and freest blooming of its class. Color Vermilion Scarlet; the brightest variety known, and admirably adapted for planting in masses, to produce a brilliant effect.

No. 1 Bulbs, selected, \$10 per 100.

No. 2 Bulbs, \$6 per 100, all flowering bulbs.

SEEDLING GLADIOLI.

A fine stock of Selected Seedlings, of all shades of color, \$10 per 100.

CHOICE NAMED VARIETIES.

A large stock of all the very finest varieties, for 20 cents to \$5 each.

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53 NORTH MARKET STREET, BOSTON.

CHOICE CRAPE VINES.

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Offer for sale the following superior varieties of Grape Vines, of strong and vigorous growth, and fine roots.

ALLER'S HYBRID, 1, 2, and 3 year old vines of this new, well-known and superb white grape. ISBAELLA, 1 and 2 year old vines of this new grape, with bunches of large size, and ripening very early.

Iona, 1 and 2 year old vines of this excellent sort, which has ripened this year as early

as the Delaware.

ADIRONDAC, 1, 2, and 3 year old vines. This variety is earlier than Hartford Prolific. and nearly or quite equal to the Hamburgh.

CREVELLING, 1 and 2 year old vines of this fine grape, which is becoming more highly

appreciated every year.

DELAWARE, 1, 2, and 3 year old vines of this popular and well-known variety.

Diana, 1, 2, and 3 year old vines of this high-flavored and excellent sort.

Also, a fine stock of 1, 2, and 3 year old vines of

HARTFORD UNION

PROLIFIC, ON VILLAGE, FRAMINGHAM,

Address

REBECCA, ROGERS, No. 4 and 15.

CONCORD. All well-known and popular grapes, grown in the open ground, without forcing, with well-ripened wood and strong roots.

Full descriptive catalogues of Fruit Trees, Grape Vines, Strawberries, &c., sent to all applicants, on the receipt of a 3 cent stamp.

HOVEY & CO., 53 NORTH MARKET STREET, BOSTON.

:: 1

DUTCH

BULBOUS FLOWER ROOTS.

We have just received per Steamship Africa, a large and select assortment of the above favorite flowering plants, from one of the most celebrated Florists in Holland, and the same source as those heretofore sold by us, which have given such perfect satisfaction.

The assortment embraces the finest

Double and Single Hyacinths;

Early Single, Double, and Late Tulips;

Polyanthus Narcissus;

Double and Single Narcissus;

Jonquils;

Crocus, New Varieties;

Crown Imperials;

Iris, English and Spanish;

Snowdrops; Hardy Gladiolus; Scillas;

Japan, and other Lilies, &c. &c.

All the varieties of which were selected by us, and can be relied upon as being of the best description and quality.

Also a fine assortment of

GREENHOUSE BULBS,

COMPRISING

CYCLAMENS, IXIAS, OXALIS, SPARAXIS, TRITONIA, TRITELEA, &c. &c.

Our Descriptive Catalogue, containing full directions for the Cultivation of Bulbs in the open ground and in pots, mailed to all applicants on the receipt of a three cent stamp.

HOVEY & CO. No. 53 North Market Street, Br

BUCHANAN'S NEW YELLOW TEA ROSE:

CATHERINE SPRUNT.

A constant and abundant bloomer, with the habit and free-growing qualities of Tea Saffrano—of which it is a seedling—and differing only in the color of flower, which is invariably of a pure deep sulphur yellow.

This is an excellent winter-flowering Rose, and a great acquisition in bouquet making. Strong one year old plants, established in pots, will be sent out at \$2 each; larger plants, \$3 to \$5 each; as soon as subscriptions for one thousand plants are received.

Orders booked and sent strictly in rotation.

ISAAC BUCHANAN, Florist,
9 West 17th Street, New York.

Oct.-2t.

Grape Vines for Vineries.

HOVEY & CO.

Offer for sale one of the largest and most complete collections of Foreign Grapes in the country, embracing every popular variety of merit, all raised from eyes from our own bearing vines, and true to name, as follows:—

Black Hamburgh, Black Hamburgh, Wilmot's No. 16, Black Hamburgh, Wilmot's, Victoria, Mill Hill Hamburgh, White Frontignan, Grizzly Frontignan, Black Frontignan, Chasselas of Fontainebleau, Black Prince, Lombardy, West's St. Peters, Gros Bleu, Barbarossa, Muscat Blanc Hatif, Bowker, Trentham Black, Muscat Hamburgh, Bowood Muscat, Royal Muscadine. Chaptal. Lady Downes. Moranet, Decandolle,

Canadian Chief. Muscat de Sarbelle. Muscat Madeira, Muscat St. Laurent, Purple Sweet Water, Champion Hamburgh, Muscat of Alexandria, Tottenham Park Muscat. · Macready's Early White, Zinfindal. White Nice, Reigne de Nice, Syrian, White Tokay, Golden Hamburgh. Pope Hamburgh, Austrian Muscat. Prolific Sweetwater. Caillaba, Richmond Villa. Trebbiana, Marchioness of Hastings. Canon Hall Muscat.

Fine strong vines, one and two years old, in pots, ready for immediate planting Prices on application.

53 North Market Street.

ORNAMENTAL FOLIAGED TREES.

WITH the introduction of the beautiful ornamental foliaged plants, and particularly the superb maples, which have recently been received from Japan, the taste for trees with ornamental leaves has greatly increased, and the demand for such trees for grouping and planting in pleasure grounds and plantations has rapidly augmented. In our climate, with our numerous American species of oaks, maples, &c., no ornamental foliaged trees can compare with the autumnal tints of our landscape scenery; so that at this season, we scarcely need the aid of But this period is so exceedingly short, that we such trees. can only enjoy their rich and varied hues for a few weeks. when their leafless branches are all that remain of so much variety and splendor. But it is gratifying to know that beauty of this kind is not, after all, so evanescent; that we have now, not perhaps in all the variety that nature so profusely spreads out before us, but an approximation to her rich colors, in the accession of ornamental foliaged trees like the purple beech, the purple maple, the purple elm, the purple hazel, the purple berberry, and others of a similar character, and if the Japan maples prove hardy, and easy to multiply, we have a rich acquisition of similar, but more varied colored foliage, which will give to our summer scenery much of the gorgeous aspect of early autumn. Like other departments of gardening the demand is only required, when the supply soon becomes abundant. Not many years ago we had but few variegated leaved trees, but the close observation of enthusiastic cultivators has reclaimed from young nurseries many accidental seedlings of singular elegance, which, but for the increasing desire to possess these varied objects of natural beauty might have been grubbed up and thrown aside as use-The Japanese, it is stated, have one or more less rubbish. variegated varieties of almost every plant cultivated in their gardens, and we may well believe it, after the numerous additions of this kind which have been made by Mr. Fortune. Dr. Hall, and Messrs. Veitch and Hogg. Our own catalogues are becoming enriched by similar acquisitions by cultivators at home and abroad, and we doubt not a few years will add many more to the number we already possess. Already the evergreen or coniferous trees are yielding to the process of production by fertilization, or accidental origin, and the arbor vitæ, the cypress, the yew, the spruce, and even the Washingtonia, afford beautiful variegated leaved varieties. These are all admirable aids in the formation of ornamental grounds, and add much to the character of every plantation. All who have seen the elegant Golden Yews of Mr. Hunnewell at Wellesley, will admit that variegated leaved trees not only produce beautiful effects wherever introduced, among other trees, but are individually objects of the most pleasing and ornamental character.

The Gardeners' Chronicle has recently had much to say regarding ornamental leaved trees, and a correspondent, who we doubt not to be Mr. Fortune himself, has some very judicious and instructive remarks on the importance of this class of trees. Mr. Bateman, a gentleman of much taste, and deeply interested in trees and plants, also, took occasion, while delivering a lecture before the Royal Horticultural Society, to allude to them, and spoke particularly of some of the most conspicuous, among which was the variegated Acer Negundo, and some others. Following up this subject, and the general taste for fine foliage, Mr. Fortune makes the following remarks, which we copy, and commend to the notice of all interested in fine foliaged trees:

In drawing the attention of our readers to the rage which sometimes exists amongst us for certain tribes of plants, we endeavored to show that, on the whole, this enthusiasm is not without its good results. It may be true that this marked preference for certain families of plants, or for what we suppose to be an improved race of florists' flowers, may sometimes overshoot the mark, yet upon the whole we have no reason to regret the general results, which are certainly of the most satisfactory kind. Our gardens are rendered more gay and enjoyable, and our parks and pleasure-grounds

have added to them quite a new feature by the introduction of foreign trees and shrubs. Moreover, the results are also apparent in our forests and on our hill sides, and a goodly number of exotic trees, which have made themselves at home with us, are likely to become of considerable importance, not only on account of the effect they produce upon our land-scapes, but also in a commercial point of view, owing to the value of their timber. For these results, therefore, we would give every encouragement to horticultural or arboricultural enthusiasm, thankful for the good it leaves with us, and excusing any little prejudices or imperfections which may be perhaps inseparably connected with it.

Our main object in alluding to this subject was to direct the attention of our arboriculturists and landscape gardeners into a somewhat different channel. We acknowledge, with gratitude, the effects which have been produced upon our garden and park scenery by the introduction of many trees and shrubs of foreign origin. Need we name as examples the Indian Deodar, the Araucaria of South America, the Pines of California and Southern Europe, the Glycine of China, and a thousand other things which are now naturalized in England. There is however, one class of trees which have been hitherto much neglected, but which we are glad to see are now attracting the attention of landscape gardeners and planters—we allude to those which have deeply-colored foliage. Upon this class of trees a little of the enthusiasm to which we have alluded would be well spent. To all who have grown weary of such things as pines or ferns or orchids. as well as to those who are proving constant to their first love, we say, "here is a subject for your enthusiasm; it will amply repay any exertions bestowed upon it, by enabling you to leave a beautiful and permanent mark upon our landscapes."

The rage for trees and shrubs with variegated foliage has supplied, and left with us, a number of very remarkable and effective objects of that class. We have amongst others our variegated hollies, ivies and honeysuckles, and the splendid Golden Yew with which Mr. Barron produces such grand effects at Elvaston Castle. It is not, however, to this class of plants that we are now alluding. The love for such beautiful objects

is rampant enough, and needs no fresh spur from us. We plead for the extensive cultivation and use of trees and shrubs which have leaves not strikingly variegated but richly colored. Already we have several of these things common in our parks and gardens, such, for example, as the purple beech, the purple hazel, and some others alluded to by Mr. Bateman, in his address to the Royal Horticultural Society on the 27th of June. We need scarcely remark that we cordially agree with Mr. Bateman as to the effects produced upon our land-scape by these trees. "With materials such as these," he remarks, "not tender, requiring glass protection, but hardy, beautiful sylvan scenery might be created which even persons with comparatively limited means might afford to provide."

Were the taste for such objects more fully developed amongst us, there is no lack of subjects to supply it. Many of them, as we have shown, are already amongst us, and many more would be soon forthcoming. Perhaps no class of trees would be more valuable for the object we have in view than the maples of Japan. They are very remarkable for the rich and beautiful color of their foliage. Some of them have leaves of the deepest purple, or red, or yellow, and others have their foliage most curiously marked. Nearly all take on the most beautiful autumnal tints, and produce a marked and pleasing effect at all times on the landscape. We have frequently thought that it must have been one of these maples that Padre Huc met with when travelling in Chinese Tartary, and about which he tells such wonderful stories. Those species which are found in the central or more northern part of the Japanese Islands would probably prove quite hardy in our climate. Many of them are now in England, although at present extremely rare. At Mr. Standish's sale last year his collection, which was very rich in maples, was entirely dispersed. We advise the possessors of these plants to take great care of them, and to propagate them extensively, for if our taste takes a turn in the way we have indicated, they will be much sought after, and will prove of great value.

We come now to another question,—Would it be in accordance with the rules of good taste to plant these trees extensively in order to produce an effect upon our landscapes?

We say "yes" without the slightest hesitation. It has been our lot to travel much in foreign countries where many of these trees to which we have just alluded are at home, where they have been planted and reared by the hand of Nature on the hill sides, and we can bear testimony to the fact that the eye is never weary of resting on those masses of brilliant coloring of many different hues which they present, and more particularly in autumn, when the leaves are ripening before they fall. Our own experience has been principally in Oriental countries, as in India, China, and Japan, but American friends have given us glowing pictures of the effects which these trees produce on the other side of the Atlantic, and we readily believe the pictures which they have drawn. If nature, then, shows us such an example, we can scarcely do wrong in following her, and we need not question the taste which leads to so much enjoyment.

With materials at hand of the kind we have indicated, we would advise all lovers of hardy trees to direct their attention to the subject, for it is one which will amply repay them. Let us have the same amount of enthusiasm displayed for these trees with richly colored foliage as we have had for pines, ferns, and variegated plants, and the most striking effect will soon be produced in our landscapes. We commend this matter to our landscape gardeners, and to all who are engaged in planting trees.

IMPRESSIONS OF ENGLISH SCENERY.

BY H. W. SARGENT, ESQ.

HOOLE HOUSE.

In the August number of the English Gardeners' Magazine, 1888, there is a very elaborate account, by Mr. Loudon, of a visit he paid to Hoole House, near Chester, then belonging to Lady Broughton, descriptive of a most extraordinary rock garden.

Being in Chester the other day, on leaving the gardens at Eaton Hall, I asked the gardener, who had been some forty years there, whether Hoole House and its rock garden still He replied, he had never heard of it. I had no better luck with one or two other gardeners, or with the landlord at the hotel. Finally, an old cabman recollected there was, or had been, a Lady Broughton, who had died thirty years ago, and he thought he had heard of Hoole House, on the Liverpool road. I ordered him to drive in the direction he thought it was, and finally, after much trouble, we found it, now owned and occupied by a Mrs. Hamilton, an old lady of 80, living by herself. The pike-keeper, living immediately adjoining her gate, had never heard of any rock garden, nor could he tell whether the place was shown to strangers-but I could walk up the avenue he supposed, and This I accordingly did, a short but exceedingly. well kept avenue, the verges and sides beautifully cut, and densely planted with large masses of rhododendrons, laurel, yews, deodars, araucarias, all, except the araucarias, being closely clipped. This formal treatment of the trees augured favorably for the rock garden, but I saw no evidence of it, and yet I saw, or thought I saw, the whole place; for it did not seem to be over five or six acres. There was, to be sure, a walled garden, which I supposed was the vegetable garden. I ventured to push open a little postern door in the wall, and found an old-fashioned vegetable garden, with indifferent and mossy fruit-trees against the wall, and one or two small glass houses, near which, in a potting shed, was an old gardener striking some geraniums. I told him that quarter of a century ago I remembered having been astonished in America with reading an account of the rock garden at Hoole House.

Did Hoole House yet exist? and if so, Where was it, and did the rock garden still exist, also?

He replied, This was Hoole House; the rock garden still existed, and was kept up just as Lady Broughton had left it, thirty years ago, when he had helped build and unbuild it, (as a young man,) as Lady Broughton was continually altering it. "His present Missus was a very old Lady. No one ever came to the place, and probably no one knew the garden existed." He would go and ask permission for me to see it. While he was absent I tried to make out where it possibly

could be. Presently the gardener returned, and taking me round to the front of the house, opened a little door in a wall covered with yew trained against it, and immediately adjoining the entrance front. A perfect scene of enchantment suddenly broke upon me. Imagine a little semicircular lawn, of about half an acre, of most exquisite turf, filled with twenty-eight baskets, about six feet in diameter, of the most dazzling and gorgeous flowers. Each basket a complete bouquet in itself, of three different colors, in circles; for instance, the lower circle would be Coleus, the 2d, yellow Calceolaria, the 3d, or upper, White Leaved Geranium. On the top, as a sort of pinnacle, a group of Scarlet Gladiolus.

The colors of the next basket would be different, viz.: the lower circle would be deep blue (Lobelia), the 2d circle, White (Centaurea Candidissima), the 3d, or upper, Scarlet Geranium. Another basket began with Gazania; the 2d circle would be Cerastum tormentosum; the upper, Lobelia L.

These 28 baskets seemed a succession of circular terraces, each color was so vivid, so gay, and so continuous. This bright parterre, set upon this emerald lawn, was surrounded by this famous rockery, from 15 to 30 feet high. built up against the stables and offices, as support, and brought down irregularly to the lawn in front, filled with every variety of fern and rock plant that would stand the summer climate of England; most of the more delicate being removed in winter to green and even orchidaceous houses. I thought nothing could have been gaver than the 28 circular beds, until I looked up and saw a much more gorgeous scene in this semicircle of rock, 30 feet high, crammed to overflowing, with every sort of Palm, Cactus, Cereus, Yucca, Gladioli, Geranium, &c. &c., in full flower, interspersed with Deodars, clipped into pyramids, Irish Yews, Golden Yews, Abies cephalonica, Pinsapo, Normandiana, &c., all clipped into pyramids. The object being not only to keep them in harmony in size, with the rocks and the garden, but in appearance; since the highest pinnacles were intended to represent the Alps, for which purpose white spar was used to represent the glaciers and snow peaks, and small Pinus Cembra (the pine of the Alps) were interspersed along the edges, and near some

yawning crevice, over which Alpine rustic bridges were thrown; through the whole of this rich and intricate maze ran a little wild path, bordered with heath and furze, and broom, which crept up the rocky sides of the cliffs, among the wild distorted looking firs, some 8 to 15 feet high, though 30 years old many of them, until they disappeared among the icy summits, apparently, of the Alpine heights.

The whole thing was an extraordinary caprice, wonderfully carried out, and admirably described and illustrated, if I remember at this distance, by Mr. Loudon, in August, 1838.

BLAIR ATHOL.

A scene of a very different character I saw yesterday at Blair Athol, the seat of the Duke of Athol, near Blair, in the Highlands, and this was a group of eight larches, being the original trees, imported 300 years ago, to try the climate of Scotland. The largest of these, which resembled in its head an oak or Cedar of Lebanon, so gigantic and wide-spreading were its ramifications, measured 18½ feet the but, 3 feet from the ground. From these trees the grandfather of the present Duke planted 27 millions of Larches, over 12,000 acres of mountain land. The Duke's deer forest consists of 50,000 acres, preserved for red deer; 30,000 for grouse, and 30,000 for deer stalking.

TAYMOUTH CASTLE.

About 20 miles from Athol is Taymouth Castle, the Marquis of Breddalbane. This estate extends 120 miles long, by 15 miles broad—including Loch Tay, 16 miles long—the castle, about 800 feet front, I think as perfect as any we have yet seen—while the park, 5 miles long by 3 wide, is more magnificent than anything we have yet seen—a most verdant sod, 5 or 6,000 head of deer in park and forest, and groups and masses and single specimens of trees, each being a study in itself, planted by the Black Douglas, 300 years ago. One beech, said to be the largest beech in Scotland, measured 43 feet, 3 feet from the ground, the diameter of its branches being 200 feet. This was protected, as were most of the finest specimens and groups, by a large circle of iron hurdles. Most of the stems were

protected by stakes, especially all trees younger than 50 years. This seems universally done in all parks, especially where there is deer.

In comparing my present impression of England with my recollections of twenty years ago, I should say that the park trees were much grander, denser, and more umbrageous than I could have imagined, but much less in variety, consisting of only oak, elm, beech, and thorn, very few evergreens in the parks, hardly any, except Scotch firs, which when old are certainly very picturesque. The flowers usually on one side of the house are mostly in ribbons, but in huge masses, and generally the whole effect produced by very few varieties, Lobelia, Yellow Calceolaria, Gazania splendens, Coleus, and the Red and White Geraniums. These, repeated over and over again, in different combinations, and separated from the Park by a sunken or wire fence.

In the lawns, which consist only of the verges and borders of grass, and intervals among the flowers, I have been wofully disappointed. They are soft and green, but filled with weeds, especially daisy, dock, and dandelion. I have not yet been far south in England, but in the north, and this six weeks tour in Ireland and Scotland, I have seen but very few of the new evergreens, and these not as large as many I have seen in America.

Aberfeldy, Scotland, October 1, 1865.

We are deeply indebted to Mr. Sargent for this highly interesting account of English residences, particularly of Hoole House, the description and illustrated notice of which, by Mr. Loudon, so strongly impressed us at the time of its appearance in 1838. It has been a source of regret that at the time of our visit, when we were at Eaton Hall, at Chester, only two miles distant, we forgot to visit Hoole House, and enjoy its singular beauty, which Mr. Sargent has so vividly portrayed. Turning to Mr. Loudon's volume, to refresh our memory, we have been struck with the accurateness of the account, as compared with Mr. Sargent's. Nothing seems to have been altered during so long a period. "It looks," as Mr. Sargent says, in a private note, "exactly as Mr. Loudon

describes it, though thirty years have mellowed and naturalized it to perfection." A repetition of such scenery would, Mr. Sargent also remarks, "be very fatiguing, but as a caprice and specialty it is certainly most remarkable." We should be glad to enrich our pages with the beautiful illustrations of Mr. Loudon, but their size and expensiveness would hardly allow it. A single inspection of even an illustration of such a rock garden, is in itself full of instruction. We well remember the impression made upon us by Mr. Loudon's description and engravings; so strongly photographed, indeed, upon our memory, that it would be easy to make a correct ground plan, and tolerably accurate sketch of its Alpine aspect.

We cannot expect to ever see anything of a similar kind in our own country, and we know of only another of a similar character to that of Hoole House, which was also described and illustrated by Mr. Loudon—this was a rock garden in Dublin—but we do hope to see examples of rock work in the grounds of our wealthy planters, and though exhibiting nothing of the grand effect of Hoole House, yet afford delightful episodes in ornamental grounds, and form admirable places to grow successfully some of the beautiful plants which cover Alpine heights, unseen and unknown only to tourists, who couple with a love of mountain scenery a taste for mountain plants.

We sincerely hope Mr. Sargent will favor us with some account of Eaton Hall, and other fine places, which he has visited during his present European tour.

POMOLOGICAL GOSSIP.

NEW GRAPES.—Among the newer grapes, which we shall refer to at another time, may be noticed some seedlings raised by Moore Bro. of Rochester, between the Black Hamburgh and the Diana, and other native kinds. These were first exhibited last year, before the American Pomological Society at Rochester, attracted some attention, and were noticed in

the published report. The present year, Messrs. Moore have had better fruit, and they kindly sent specimens for exhibition to the Massachusetts Horticultural Society, which unfortunately did not arrive until the last day, but which, however, came before the Fruit Committee, who gave them a trial, and will undoubtedly report upon their respective merits.

There were five sorts, viz., the Diana Hamburgh, Hardy Chasselas, Musk Chasselas, Clover Street Black, and Improved Clinton. Of these the Diana Hamburgh and Clover Street Black were new, and are, apparently, very excellent grapes; and if on further trial they are hardy, and ripen early, they will claim a place among our best grapes.

The Diana Hamburgh was scarcely ripe, but it was however quite sweet, and certainly promises well; the foliage evidently shows its hybrid origin, and we have little doubt that Mr. Moore has been as successful as Mr. Allen. The Clover Street Black is a very black grape, spirited, sweet and good. The Musk Chasselas and Hardy Chasselas, although having a strong musky flavor, appeared to be wanting in richness; perhaps the specimens were over ripe. We certainly should wish to try them again before expressing any decided opinion of their real merits.

At the exhibition of the Fruit Growers' Society of Western New York, at Rochester, Messrs. Ellwanger & Barry exhibited specimens of a new seedling, called No. 19, raised among others, from the Delaware. The Committee placed it, in quality, among the best new varieties. Messrs. Bronson, Graves & Selover, also, presented a seedling, claimed to be earlier than Hartford Prolific, and equally as good.

Mr. Parker Barnes exhibited specimens of his new seedling grape, at the exhibition of the Massachusetts Horticultural Society, September 19th. It is similar in general appearance to the Isabella, but is as early, or earlier than the Concord, and fully or quite equal in quality. The berries and bunches are not quite so large. It promises well.

NEW PEACHES.—The peach crop has been very good the present year, and some very splendid specimens have been presented for exhibition at the Massachusetts Horticultural Society. Among them one or two seedlings of remarkable

size. Mr. Foster of Medford exhibited 12 which measured 10 inches in circumference, and were similar in appearance to the Early Crawford. At the Annual Exhibition of the Pennsylvania Horticultural Society a very fine seedling was shown by the Rev. W. H. Furness of that city. These were of large size, 9 or 10 inches in circumference, and apparently similar to the well-known Old Mixon, but later than that sort. Both are well worthy of extended culture.

THE MAXATAWNY GRAPE.—Very fine specimens of this white grape were exhibited at the Annual Exhibition of the Pennsylvania Horticultural Society, by J. E. Mitchell, Esq., late President, who kindly gave us some of the grapes, which we found to be most excellent. We have never yet fruited this variety, and we believe it is rather late for our latitude, but where it will grow and ripen as well as those of Mr. Mitchell, it will prove, with the Rebecca and Allen's Hybrid, one of the best of our native white grapes. The grapes were of a most beautiful amber color, very sweet, rich and delicious, not equal to the Rebecca, but with a peculiar flavor of its own. The bunches are scarcely as large as the Rebecca. At the meeting of the Fruit Growers' Society of Western New York, held at Rochester, September 21, some fine samples were shown by C. W. Seelye, who states that it is an excellent light colored sweet grape, strong grower, abundant bearer, hardy, and of a quality that pleases every one. It is a sort that will be highly esteemed when more known.

PROMISING NEW GRAPES.—One of the questions discussed at the late meeting of the Fruit Growers' Society of Western New York, was as follows: The most promising of the new varieties of grapes? It elicited the following discussion:

CREVELLING.—Mr. Barry was very much pleased with the Crevelling—one of the best Early Black grapes. Mr. Hooker said it hangs well to the vine, even until frost. Mr. Bronson had never seen leaf blight upon the vine. Mr. Clark had seen it at Hammondsport, and thought well of it. Mr. Barry said it was very prolific. Mr. Little said that each year the bunches get more compact—thought well of it, and Mr. Hooker had been informed by Germans that it was the best native wine grape.

IONA.—Mr. Bronson had seen it at several places in Geneva. It proved earlier than the Delaware, and Mr. Downing had informed him of the same fact—it is a rich, sweet, early grape, free from disease of any kind.

ADIRONDAC.—Mr. Seelye had seen the grape in Albany, August 18th, well colored, and apparently ripe for use; saw it, also, on the grounds of a gentleman in the suburbs of the city, quite ripe, September 1. It is a strong grower, and very prolific, and the earliest good grape we have. Dr. Beadle said one of his neighbors had fruited it—it was perfectly ripe, September 1. Mr. B. Fish said a gentleman at the State Fair, who had grown it, said it had mildewed more than any other. Mr. Hooker saw it in bearing in Rochester, some 50 bunches on a small vine—greatly overcropped—was mildewed some, but it was in a bad place, where Isabella and everything else, except Delaware, was spoiled by mildew.

ROGERS.—Mr. Craine thought most of Nos. 4, 15, 19, and 39. No. 15, in particular, is a very fine grape—no pulp, sweet to the centre, and very rich. Mr. Hooker thought Nos. 4 and 15 gave good satisfaction to the Germans in Rochester.

THE SPRING FLOWER-GARDEN.

FROM THE GARDENERS' CHRONICLE.

In a recent number we gave our readers some interesting hints upon the Summer Flower-Garden. We now present them with some remarks by the same writer, on the "Select" Spring Garden Flowers, which they will find full of valuable suggestions. Our gardens are sadly deficient in objects of beauty early in the season, and where ample provision has not been made by the addition of bulbs, the flower-border is scanty enough till summer is well under way. There is no reason however, why we should not have, even with our cold winters and late springs, a more profuse display of flowers in the latter season, if a judicious selection is made of the many plants which bloom at that period. Snowdrops, crocuses, daffodils, early tulips, and other bulbs, are beautiful aids to

accomplish this; but they are not all, for though abundant in flowers they lack variety in foliage. If to these we add the early phloxes, anemones, iberis, adonis, allyssum, &c., there will be a constant succession of elegant blossoms up to the period when our annuals and bedding plants begin their lavish display.

The following list will therefore be found valuable: some of the plants enumerated are not hardy in our climate, but, leaving these out, there are enough to make a great variety, and render the spring garden one of deeper interest to every lover of beautiful plants:

It is with the greatest pleasure that I write this list, convinced that all who obtain and grow the plants therein mentioned, will add for every plant & new source of interest, and a new charm to their garden.

I will begin with the little Irises, for they are of great beauty, and very rarely seen as well as they might easily be grown. I. reticulata, pumita and cristata are charming little plants; so Messrs. Backhouse's little Iris attica, which I have not yet had the pleasure of seeing in flower, is said to be; and, so too, is a dark purple species, I have seen in flower at Messrs. Henderson's, where it is called I. spathulata. There are also several fine varieties of I. pumila. They all luxuriate in sandy peat; at Wimbleton I have seen beds of pumila, literally a sheet of blue; but any light sandy soil will do. At Glasnerin, I. cristata is a gem, and grows in warm borders, against houses, as freely as a native Rumex.

The transition is easy from Iris to Crocus, and there are, I believe, some rare things in the latter genus, such as C. Aucheri, lately introduced, but for beauty nothing beats the finer varieties of Veruns, Sir Walter Scott and La Majesteuse to suit. Tritelia uniflora is a beautiful little plant of similar habit, very rarely seen as a hardy spring bulb, but I have proved it so in soil apparently composed of an equal admixture of London clay and bad putty. It is a lovely dwarf plant, and one that wants "bringing out," being quite as useful as the best Squills. Sisyrinchium grandiflorum is a fine plant for the spring garden. The neater and most beautiful Nag-

cissi will of course be essential: for choice say, N. Bulboco-dium minor, the newly introduced and very pretty juncifolius, the pure white dubius, and the true sweet Jonquil; but it is such a fine genus that many others may be picked out. Sternbergia lutea is a fine plant where it does well, and on light or gravelly soils it displays as good and bright a bloom about the 1st October, as the yellow Crocus does in spring. But I am wandering from youth to age, from green leaves to brown, forgetting that I am writing of "spring" gardening; those, however, who grow these exquisite spring plants successfully must give them a neat little garden for themselves, and then of course a good autumnal subject will not be out of place among the beauties which are to embellish the garden after most of our spring things are past.

Zephyranthes is a lovely genus, particularly where grown in nice peaty soil in a sheltered place, as it is at Messrs. Osborn's. Galanthus plicatus, the Crimean Snowdrop, too, is fine! Professor Syme tells me that with him it is much hardier and more easily grown than the common Snowdrop! Leucojum vernum, again, is a fine and fragrant plant.

Now for the Squills. They, unlike Triteleia and another little fellow named below, do not want making known. Scilla sibirica is perhaps the best, though anybody who could see Mr. Mackay's beds of S. bifolia in bloom at Totteridge would doubt the superiority of the Siberian. S. præcox alba is a charming little dwarf, and so is S. rosea very desirable for its color and neat habit. Hyacinthus amethystinus and Muscari bytryoides and its white variety must not be overlooked. Then Puschkinia scillioides-if I did nothing in this paper but make this known as a fascinating fairy among spring plants, there would have been papers written with less result; it is the most delicately beautiful thing in the way of a spring bulb that I am familiar with-a beautiful light blue shaded off to white (I am describing from memory,) and easily grown too-easier than the Squills; it does not last long in flower, but few spring flowers do. Lilium tenuifolium is a dwarf early flowering species, for beauty and brilliancy of color second to no other. Erythronium Dens-canis and the var. major are fine things, of which I need not tell.

Another plant I want to say a few words about is as old as Methusaleh, but might as well have arrived with Maranta Veitchii for all the use that has been made of it—I mean Bulbocodium vernum. It is generally seen in a state of single blessedness, probably in a pot in a musty old frame, but get a lot of it and put it out in good sandy soil in your choice spring garden, and it will prove one of the best and earliest of spring bulbs, sending up its fine large rosy-purple flower-buds, distinct in color from any other spring flower, earlier than Crocus Susianus—in fact, they were showing for several weeks ere the snow took leave of us this year. I had an edging of it composed of about 250 plants, in a very bad soil, as healthy as growing youths of Rumex Hydrolapatham.

Mr. Niven, of Hull, says Silene acaulis alba and S. exscapa are among his best Alpines, being in their season covered with hundreds of flowers; grow them by all means in a little Silene alpestris cannot be done without. Phlox frondosa and Nelsoni will make charming little beds, or become completely covered with flowers on rockwork. paticas, all, single or double, are indispensable, but the new one, H. angulosa, is the only one I need particularize. It is likely to show to great advantage when we get good big plants of it. In Backhouse's new catalogue of Alpines, &c., the flowers are said to be sometimes as large as a crown-piece. Ranunculus amplexicaulis, bullatus fl. pl. and the "fair ladies" are among the best of this genus; and Adonis vernalis are brilliant. Anemone vernalis and palmata I have not seen in good flower, but they are known to be fine, and with hortensis, fulgens, and sylvestris very free. Aquilegia alpina again, one of the most exquisite flowers ever peeped into, if true is indispensable, but it is actually surpassed by the distinct and lovely A. cœrulea, now in the hands of Mr. Thompson. Cheiranthus alpinus, Marshalli and ochroleuca—the last for choice. Some Epimediums are good, particularly if in shade and peat. Associate them with your best Hellebores, Salix lanata, &c., round the margins of your bijou spring garden. Aubrietias are indispensable, and now we are getting new ones. Cerastium alpinum will form woolly dwarf edgings, and flower densely the first week in May. Saponaria

cæspitosa is a promising new plant in this order. Dianthus alpinus, petræus, cæsius, glacialis, and Fischeri are five excellent species, all the more acceptable because the greatest, muddle is to be found in the genus, if once you go far beyond these distinct ones. D. cæsius does well on old walls, &c.; alpinus and petræus grown well are two of the loveliest plants in the country. I find I am diverging from all system, but it's not system we want, but good plants.

Androsace lanuginosa, villosa, carnea, and Chamæjasme, are gems of the first water. Primula pubescens, ciliata, marginata, and nivalis, will prove a good start in this ravishing genus. Of the Gentians, verna, ciliata, and bavarica are among the best. Cyclamens Coum and vernum must not be forgotten; nor Dielytra eximia, which has graceful leaves and bright flowers.

Sedums will come in well either as single plants or edgings, but they must be used in some shape or other; dasyphyllum, brevifolium, monregalense, Ewersii, and hispanicum, being among the best of the wonderfully neat lot. Sempervivums will make still better edgings; S. globiferum, for choice, being as compact and neat as anything can be; the Spiderwebbed one is hardy in London. S. Hirtum makes a charming bed or edging, and is a prodigious bee-feeding plant too. Others of the genus are fine, and all so thoroughly hardy, that they do finely in the open air in Tottenham-court-roadia and elsewhere in London.

Saxifragas are, of course, indispensable. You can do a great deal with a good selection from this very extensive genus. What can be neater, and to all observers more interesting, than lines of the little half-succulent encrusted-leaved Saxifragas, such as Hostii, rosularis, Aizoon, &c., with the distinguished and free-flowering pyramidalis. They are generally grown in pots, but may be grown in the open air with the greatest ease, and are so grown amidst the smoke of London. Nothing seems to affect them in the way of climatic vicissitude, and no plants are so presentable all the year round. They are never in dishabille. Saxifraga Andrewsii is an ornamental species, or rather hybrid. But before leaving the Aizoon section, I should have said that Rocheliana and luteo-

viridis are among the prettiest of the small encrusted section, that produce their gallant and sturdy little flowers in tolerable plenty. I once saw 70 kinds of mossy Saxifragas in one border in the delightfully interesting botanic garden of the late Mr. Borrer, the Grand Llama of British botanists, but one who with all his love for British plants, and all his expenditure of time, labor, and wealth in their behalf, could yet find time to grow and study thousands of continental and American plants. These mossy Saxifragas are so much alike in habit, &c., that it is hardly desirable to specify individuals; nearly all are good for greening—and what plants produce so lovely a green, especially when the showers of brown leaves begin to fall? One I have, called Stansfieldii, is of close firm habit, and the freest and earliest bloomer of the whole.

Dodecatheons will beautifully fill the centres of beds—I mean the common species. D. splendens and integrifolia are two fascinating gems, very scarce yet. Antennaria dioica rosea would form an exquisite little edging plant for the choice spring garden. Wherever a soil is found fit to grow well the tiny Andromedas and Menziesias, as they grow at Comely Bank and other places near Edinburgh, they will form a unique addition to the select garden. Eritrichium nanum is said to be one of the loveliest Alpine gems, but as yet it is rare.

I have mentioned enough of "gems," and will conclude with a few subjects of easier culture, which can be got and grown largely at once for edging your beds, or for filling up the larger ones with chaste mixtures. Myosotis sylvatica is one of the best of these; sow it in early summer. Next come the double daisies of sorts, the double Primulas, Cliveden Pansies, white, blue, dark, and the Magpie Pansy. Myosotis alpestris and Myosotis montana, a beautiful thing if grown in a moist district and in a somewhat shady situation. In dry ground it is comparatively poor; but as Mr. Atkins grows or used to grow it at Painswick, of surpassing loveliness. Lacking a really good rockwork well-suited to the growth of Alpines and such choice subjects as those named, the best way to grow the most difficult is in a bed raised a foot or so above the level by stones around the margin, with a few through

the centre; the soil to be very sandy, with perfect drainage and abundant moisture at all times; and the bed or beds to be in all cases fully exposed.

FLORICULTURAL NOTICES.

THE NATIVE HEATH.—Since our notice of this heath in our last number, we learn from the Canadian Naturalist that it has also recently been found in Greenland, thus making four localities in North America. It may now be considered a native, without doubt.

LILIUM AURATUM.—This new lily has been grown to great perfection by some of the English cultivators. A specimen raised by Mr. Constantine, exhibited at a meeting of the Royal Horticultural Society, August 8th, had 29 blooms upon it; the single bulb producing two stems, which bore, respectively, 15 and 14 flowers. It was one of the original bulbs imported from Japan by Mr. Veitch of the Chelsea nursery. It evidently requires more careful culture than L. lancifolium and its varieties, but it will repay all the care bestowed upon it.

Double Flowered Epacris.—The English papers announce the production of a double flowered Epacris. Each flower presents a great number of corollas, one within the other, to the entire exclusion of stamens and pistils.

Nosegay Pelargoniums (or Geraniums.) It is well known to cultivators of this class that the late Mr. Beaton, after many years devoted to the production of new varieties, succeeded in raising a large number, at the time of his death some 3000 plants, the larger part of which were thrown away, but the remainder promising well were kept for further trial. Many of them have proved to be new and valuable, and important additions to this useful class of bedding plants, as well as for pot culture. Among those whose merits are fully ascertained are Indian Yellow, Mrs. William Paul, Orange Nosegay, Amy Hogg, Scarlet Gem, Model, Duchess, Donald Beaton, Magenta Queen, Glowworm, Alexandra, Enchantress,

and many others. Not only are many of them new in color, but they have massive trusses, with fully 50 flowers expanded at one time. The plants are also compact and dwarf in habit, and flower abundantly in 4 or 5-inch pots. These will form decided acquisitions to our bedding plants, when introduced, and will displace many of the old larger growing and less free blooming sorts. Why will not some of our amateurs and cultivators try the production of seedlings? they soon blossom, and no doubt greatly improved and beautiful varieties would be the result, rendering it unnecessary to depend upon imported plants to add variety and beauty to our collections.

846. FOURCROYA LONGÆRA Karw. Long-Enduring Four-CROYA. (Amaryllidaceæ.) Mexico.

A greenhouse plant; growing fifteen feet high; with white flowers; appearing in summer; increased by offsets; grown in rich soil. Bot. Mag., 1865, pl. 5519.

A magnificent species, attaining, in its native climate, the height of fifty feet, with a flower stem forty feet more. The plant, however, which flowered in the Kew gardens last summer, from which the drawing was made, was fifteen feet high. Like the Agaves, to which it is allied, the plants die after blooming. It has leaves similar to the Yucca, and the flowers, individually, are large, white, and thickly set on the tall panicle. It is considered as one of the most marvellous productions of the vegetable world. (Bot. Mag., July.)

847. DENDROBIUM SENILE Parish. WHITE-HAIRED DENDROBIUM. (Orchidese.) Moulmein.

An orchideous plant. Bot. Mag., 1865, pl. 5690.

A handsome species, with bright yellow flowers, with white hairs profusely scattered over its stem and leaves. It lasts in bloom a long while, and may be grown in a shallow pot, or on a block of wood, near the glass. (Bot. Mag., July.)

848. Marianthus Drummondianus Benth. Drummond Marianthus. (Pittosporese.) Swan River.

A greenhouse twiner; growing several feet high; with blue flowers; appearing in winter; increased by cuttings; grown in peaty soil. Bot. Mag., 1865, pl. 5521.

A slender and graceful twining plant, with small leaves and numerous clusters of pale blue flowers, not unlike those

of the Sollya, but produced more thickly on the plant. It is a very pretty species. (Bot. Mag., July.)

849. Drimia' alti'ssima *Hook*. Lofty Drimia. (Aphodeleæ.) Natal.

A greenhouse bulb; growing two feet high; with greenish flowers; appearing in spring; increased by offsets; grown in light rich soil. Bot. Mag., 1835, pl. 5522.

A bulbous class of plants, the present species of which produces large leaves, and a very tall spike of greenish flowers. It is the finest of all the Drimias. (Bot. Mag., July.)

850. RHODODENDRON, SALMONEO ROSEUM. Garden Hybrid.

Another of the Belgian seedlings, which are produced in such quantities, and from which have been selected many most distinct and remarkable kinds. The present variety is most beautiful, with large flowers of a salmon rose, distinctly and boldly spotted with black purple. The heads of flowers are very large and well formed, and the variety is a magnificent acquisition. (111. Hort., May.)

851. PHALENOPSIS SCHILLERIANA Reich. SCHILLER'S PHALENOPSIS. (Orchideæ.) Philippines.

A cool house orchid. Bot. Mag., 1865, pl. 5560.

One of the most beautiful of the beautiful genus of Phalænopses. Surpassing P. amabilis, having not only broad and long leaves, elegantly marbled with darker green, but the flowers are of that lovely pink hue, impossible to depict on paper. The flower stems often bear a hundred blossoms. It may be grown in a moderately cool house. (Bot. Mag., July.)

852. Alstrœmeria densiflora *Herb*: Dense-flowered Alstræmeria. (Amaryllidaceæ.) Peru.

A greenhouse plant; growing 6 feet high; with orange colored flowers; appearing in summer; increased by division of the roots; grown in light, rich soil. Bot. Mag., 1865, pl. 5531.

A rich colored variety of the beautiful Alstræmeria, which forms a kind of twining plant, growing 6 or 8 feet high, with numerous umbels of orange colored flowers, which are very showy. It is a native of Peru, and was introduced by M. Veitch. (Bot. Mag., July.)

853. Hæmanthus incarnatus Burch. Flesh-colored Hæmanthus. (Amaryllidacese.) South Africa.

A hothouse bulb; growing a foot high; with firsh-colored flowers; appearing in spring; increased by offsets; grown in light, rich soil. Bot. Mag., 1865, pl. 5532.

A very pretty species of the Hæmanthus, with dense heads of delicate flesh-colored blossoms; it is one of the handsomest of the genus. (Bot. Mag., July.)

854. Lankasteria Barteri Hook. Mr. Barter's Lankasteria. (Acanthaceæ.) West Africa.

A greenhouse plant; growing two feet high; with yellow flowers; appearing in winter; increased by cuttings; grown in rich soil. Bot. Mag., 1865, pl. 5533.

A new and beautiful plant from West Africa, having been raised from seeds by Dr. Moore of the Glasnevin Gardens. Most of the Acanthaceæ have blue or purple colored blossoms. This has deep yellow flowers, with an orange eye, about the size of a phlox, and appear in dense spikes, in a similar way, at the ends of the shoots. It grows erect, and the leaves are large and deep green. It is a very showy and most desirable plant. (Bot. Mag., July.)

·855. EUPHORBIA MONTEIRI Hook. Mr. Monteiro's Euphor-BIA. (Euphorbiaceæ.) South West Africa.

A greenhouse plant; growing four feet high; with scarlet flowers; appearing in summer; increased by cuttings; grown in light rich soil. Bot. Mag., 1865, pl. 5534.

A curious specimen of the Euphorbia, of robust growth, with narrow ovate leaves, and long shoots, at the ends of which appear small scarlet flowers, surrounded by a broad green involucre. These appear successively, every third or fourth day, one set withering before the others bloom. (Bot. Mag., July.)

856. IRIARTEA EXORRHIZA Mart. ROOT-STEMMED IRIARTEA: (Palmacese.) Amazon.

A hothouse plant. Ill. Hort., 1865, pl. 436.

This is a new and splendid palm, found on the borders of the Amazon, and growing in its native habitat to a colossal size, (100 feet.) But it forms a fine tree in the hothouse, and beautiful specimens have been produced from seed in the Belgian collections. It is one among many others which ought to grace the choice collections of our wealhy amateurs. (111. Hort., May.)

857. SMILAX ORNATA? Nob. VARIEGATED-LEAVED SMILAX. (Smilacese.) Mexico.

A hothouse climber, with variegated leaves. Ill. Hort., 1865, pl. 439.

A new and beautiful climbing plant, introduced from Mexico, by M. Verschaffelt, and the name of which is yet uncertain in consequence of the absence of the flowers. It forms, however, a most beautiful addition to our variegated foliaged plants, each leaf being about 9 inches long and 4 in diameter, cordate at the base, tapering to an acute point, and three nerved, deep shiny green, the spaces between the nerves elegantly spotted and marked with white. As a plant for large vases, trailing over its sides, for pyramids, or for training up columns it is admirably adapted, and fills the place for which so few are suited. Whether known as a Smilax, or by any other name, it will become a popular and greatly admired plant. (Ill. Hort., May.)

858. TELEIANTHERA FICOIDEA VAR. VERSICOLOR Moq. Tand. VARIOUS-COLORED TELEIANTHERA. (Amaranthaceæ.) Brazil.

A greenhouse plant; growing one foot high; with variegated leaves; increased by cuttings; grown in rich soil. Ill. Hort., 1865, pl. 440.

A greenhouse and bedding plant, introduced by M. Verschaffelt from Brazil. It grows about a foot high, much branched, and forming a dense suffruticose plant; the leaves are small, opposite, roundish ovate, of a coppery red hue, changing to light rose, with divers green and coppery stripes in the spaces between the nerves. In general aspect it resembles the Coleus in miniature, and, on account of its very dwarf habit, it is admirably suited for small borders and edgings, where taller growing plants would be out of place. It promises to be a valuable acquisition. (Ill. Hort., June.)

859. Rose, EMPEROR OF MEXICO. Garden Hybrid.

A hybrid perpetual. Ill. Hort., 1865, pl. 441.

This is a very dark, almost maroon colored rose, raised from Gen. Jacqueminot, by M. Verschaffelt of Gand. It is vigorous, flowers freely, and is one of the darkest and richest roses obtained for some time. (Ill. Hort., June.)

860. ALTERNANTHERA SPATHULATA Nob. SPATHULATE-LEAVED ALTERNANTHERA. (Amaranthaceæ.)

A greenhouse plant; growing a foot high; with variegated foliage; increased by cuttings; grown in rich soil. Ill. Hort., 1865, pl. 446.

Another new bedding and greenhouse plant, admirably adapted to the open ground in summer, where it grows freely, and forms dwarf tufted bushes, in habit and aspect similar to the Teleianthera before noticed, and grouped with which, in the open border, it produces a charming effect, by the density as well as beauty of its varied colored foliage, which is deep red or brown, changing to rose, and tinted with green. The flower garden will have a new feature added to it by the use of these plants for summer decoration, and the greenhouse new interest in the winter season. (Ill. Hort., July.)

Societies.

CAMBRIDGE HORTICULTURAL.

The Fourth Annual Exhibition of this Society was held at the City Hall in Cambridgeport, on Tuesday, Wednesday, and Thursday, September 26, 27, and 28, 1865.

Quite unexpected to the members, who at one time thought the season was so dry there would be but few fruits to show, the Exhibition was the best the Society has ever made. Not only were pears produced in greater quantity, but of superior quality, surpassing any previous display of this fruit. The grapes were also excellent, and some specimens of peachess remarkably fine. Flowers were not so abundant, though there were many choice bouquets. The plants were mainly from the large collection of Messrs. Hovey & Co., and embraced many beautiful foliaged plants, as well as several palms, yuccas, &c. The show of vegetables was large and excellent, and formed an interesting part of the Exhibition.

The pears, however, were the great feature of the Exhibition: following so closely on the Annual Show of the Massachusetts Horticultural Society, to which most of the members contributed liberally of their choicest specimens, it was believed they could not be excelled; but this Exhibition proved to the contrary, for not only were the pears fully equalled, but in some varieties surpassed them, both in size and beauty. Some of the varieties were truly remarkable. Beurré Diel from Mr. Pettengill weighed 23 ounces; and Messrs. Dickinson, Nudd, Chase, and Stiles, had specimens nearly as large. Numerous lots of Duchesse contained specimens weighing

from 16 to 24 ounces each. The De Tongres and Beurré Bosc were no less noted. Messrs. Hovey & Co. had superb Sheldons, and Doyenné du Comice. There were upwards of 50 entries of fruit, Messrs. Hovey and Vandine showing a large number of varieties, completely filling every available space in the large and commodious hall.

The native grapes were also fine; Messrs. Davis & Bates had 10 varieties, among them fine Rebecca, Adirondac, Delaware, Allen's Hybrid, and others. Splendid Union Village from J. Haley, and fine Concords and Delawares from various contributors.

Numerous premiums and gratuities were awarded for fruits, flowers, and vegetables, but we have not space to enumerate them. The Exhibition proved that the cultivators of Cambridge maintain their reputation as the most successful cultivators of fruit.

PENNSYLVANIA HORTICÜLTURAL

The Annual Show of this flourishing Society was held in Philadelphia on Wednesday, Thursday, and Friday, the 27, 28, and 29th of September.

The Exhibition was held in Yale's large tent, procured from Boston, and afforded ample space for the accommodation of the plants and fruits. A 6-feet table completely encircling the tent, equal to 500 in length, was nearly filled with choice plants, about 100 feet being devoted to vegetables. Besides this there were other tables for plants, and two for fruits in the centre. Towards one end an artificial island was formed by a circular space of 40 or 50 feet, surrounded with a small stream of water, in which callas and other plants were growing. A rustic bridge was thrown across the stream to admit of access to the island. The island was a mass of tropical vegetation, superb palms, gigantic yuccas, pampas grass, huge begonias and other plants being tastefully arranged to form a picturesque and natural growth. When lighted up in the evening it formed an enchanting scene.

The main features of the show were the magnificent foliaged plants and palms, which are so extensively cultivated in the collections of the wealthy amateurs of Philadelphia, who contributed liberally to the Exhibition. We have not space to enumerate many of the beautiful things, but cannot omit some of the more important; these were as follows:--Cyanophyllum magnificum, from M. W. Baldwin and M. Baird; Dicksonia antarctica; Dracenas of several kinds, numerous Lycopods and Ferns, and superb Caladiums, from Fairman Rogers. Twelve Caladiums, from General Patterson's garden, were the most remarkable specimens of these magnificent plants. They were from three to six feet high, and contained from twenty to thirty immense leaves on each: the most showy and distinct were Belleymei, Chantini, picturata, argyrites, and bicolor splendens. The President, D. Rodney King, Esq., had many fine plants, particularly Papyrus variegata, Alocasia metallica, and grand Caladiums. Superb Cissus discolor, and C. porphyrophyllas, from M. W. Baldwin. The majestic Doryanthes excelsa from J. Sherwood, just coming into bloom.

Crotons, Marantas, Ananassa variegata, and other plants, from R. Buist. Messrs. Meehan and Mackenzie also sent several specimens of various plants. The arrangment of the plants was excellent, and the display truly grand.

Of the fruits we cannot speak so highly; the foreign grapes, contributed by Johns Hopkins of Baltimore, Mr. Mitchell, the late President, and other cultivators were excellent; among them we noticed the Gros Colman, black, with very large berries, and Black Damascus, very large berries. Pears were indifferent, and not in large quantity. Native grapes were not so good as we expected to see; but we noticed some fine Maxatawny, Delaware, and a few others.

The vegetables, with the exception of potatoes, were not so numerous or so good as we expected to see. The potatoes exhibited by A. W. Harrison, Recording Secretary, were remarkably fine, comprising half a bushel each, of some twenty or more kinds, among them the Cusco, Garnet Chili, Early Goodrich, &c., all large and well grown, the average product per acre of each kind given, all planted at the same time, on the same ground, with the same fertilizing material which Mr. H. uses, discarding, as he does, all manure, as tending to cause rot.

The Exhibition was a decided success; the attendance was very large, the immense tent being crowded with visitors every evening. The Society may not only congratulate itself upon the superiority of the display, but upon its financial results. We have not yet seen any report of the award of premiums.

Massachusetts Yorticultural Society.

July 1.—At this meeting the following members were elected:—

F. L. Ames, Easton; Peter Smith, Andover; William Pratt, Winchester; William H. Boardman, Boston; Frederick Beck, Brookline; Edward G. Tileston, Brookline; Moses Jones, Brookline; W. H. Allen, Dedham; John H. Dane, Brookline; Richard L. Saville, Brookline; John W. Sawyer, Grantville; Isaac Cooke, Charlestown; Abijah Farrer, Boston; Samuel A. Carlton, Somerville; Wingate P. Sargent, Melrose; Henry L. Dalton, Boston; Joseph Howard, South Boston; John Q. A. Griffin, Medford; Charles Furnaux, Melrose; Russell P. Eaton, Dorchester; Theodore H. Bell, Roxbury.

August 5.—At this meeting the following members were elected:—Edward S. Philbrick, Brookline; Francis A. White, Brookline; Mrs. E. M. Gill, Medford; William Maloon, Salem; Charles F. Wilder, Grantville; William Miller, East Boston; William D. Bickford, Brighton; A. W. Spencer, Dorchester; Frank F. B. Kern, Cambridge; Comfort Weatherbee, Dedham; Benjamin P. Wear, Marblehead; E. W. Clap, Walpole; Oliver Holden, West Newton; S. B. Ball, Port Norfolk; M. W. Chadbourne,

Watertown; Thomas Hooper, Bridgewater; Benjamin D. Hill, South Danvers; Isaac P. Kendall, Somerville; George Penniman, Milton; Horace Partridge, Somerville; George H. Preston, Boston; Alfred Loring, South Hingham; Matthew Bolles, West Roxbury; Edward Atkinson, Brookline; John Fillebrown, West Cambridge; Charles A. Crain, West Cambridge; Joseph Richardson, Boston; Adams Ayer, Roxbury.

Sept. 2.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The following members were elected:—C. D. Head, Boston; Caleb Bates, Kingston; Curtis Davis, Cambridgeport; Ezra C. Hutchins, Newton; Charles Rice, Newton Lower Falls; Thornton K. Lothrop, Boston; John Lowell, Newton; William Edson, Boston; John Botome, Stoneham; John Hill, Soneham; William Rawson, West Cambridge; John G. Barker, West Cambridge.

At the close of the 37th Annual Exhibition, on Saturday, September 23, the Committee of Arrangements, as customary, with several invited guests, sat down to a dinner at the Parker House, at 3 o'clock. Among the guests were Col. M. P. Wilder, Prof. Russell, Jos. Stickney, Esq., and Hon. Jos. Breck. The President, C. M. Hovey, Esq., presided. After satisfying the appetite with the good things of the table, the President rose and congratulated the Committee upon the success of the Exhibition, and the prospects of the Society with the ample accommodations afforded by the new building, and closed with the following sentiment:

The Thirty-Seventh Anniversary.—The consummation of our longcherished hopes, bringing with it fond recollections of the past, and brilliant anticipations of the future.

The President then stated that we had with us several invited guests, and among them our esteemed and respected friend, and former President, the Hon. M. P. Wilder, whose presence, for the second time in two years, we hold as the precursor of the day when his health and usefulness should be fully restored. Though absent he had not been ignorant or indifferent to our progress, but his wishes and hopes were for our success, and the advancement of horticultural science throughout the land. He concluded by proposing the health of the Hon. Mr. Wilder.

Mr. Wilder rose and addressed the meeting nearly as follows:— Mr. President, and Fellow Associates:

I am overwhelmed by this kind reception, and beg to assure you that it affects me most deeply. For much of the time, during the last two years, I have had one foot in the grave, and with but little hope of the perfect recovery of my health. This reunion with old and familiar acquaintances, is therefore most gratifying to my feelings, and I desire to bless the Lord, that he has so far restored me, that I am able to be here today, to participate in the privileges, and pleasures, of this interesting occasion.

Mr President, it was a matter of great gratification that I was able to be present at the dedication of the new Horticultural Hall, and to listen to your eloquent, classical, and appropriate address. I rejoiced that our Society, now in the zenith of its prosperity, had one so capable, both in

practical and scientific qualifications, of discharging the official duties of the chair. I may be permitted to express this opinion in your presence, for we have been long acquainted with each other. You and I, Sir, have been pursuing the same path of investigation and observation, for more than thirty years. We have been travelling on together, side by side; I beg your pardon, for while you have taken good care to keep a little ahead of me, I have, with characteristic circumspection, contented myself to follow a little in the rear. [Laughter.]

Mr. President, you have requested me to give some information, in regard to the old Horticultural Hall, and the early history of our society. In regard to the former, time will only permit me to remark, that with its erection a new impulse was created, and it was soon found that the increasing wants of the Society demanded a hall of larger dimensions. This fortunately has at last been obtained, and I rejoice with you Sir, in the fact that we have erected one of the most beautiful buildings in the city, and in every respect suited to our wants.

In regard to the early history of the Society, there are few left to tell this story. You and I Sir, were present at its first celebration, and the

scene is fresh in my memory.

Genl. Dearborn, ever to be honored and remembered, presided and gave • as a toast, "Intelligence and Industry. The only conservators of the Republic." Easily do I recall the sentiments offered by Gov. Winthrop, Harrison Gray Otis, John Lowell, Daniel Webster, and others at the dinner table.

Prophetic words, those of Lt. Gov. Winthrop, and Mr. Lowell. The former gave,

"The Massachusetts Horticultural Society. The intelligence and zeal manifested in its infancy are sure presages of its future usefulness and prosperity."

To which may be added the one offered by Mr. Lowell: "I give it welcome, as the *proper means*, the best means, the only means of concentrating the individual skill of our excellent and practical cultivators. May its success equal my hopes, it cannot exceed them."

Mr. Wilder then alluded to the celebrations of late years, in Faneuil Hall and elsewhere, where the festive board was graced by the presence of Madam, the widow of Alexander Hamilton, at his side, Messrs. Webster, Everett, Downing, Winthrop, Skinner, Quincy and others, quoting from the speeches of these gentlemen, and at some length from Mr. Everett's inimitable speech, on the very day of his return, after an absence of four years as minister at the Court of St. James.

Mr. President, I recall the thought expressed in Genl. Dearborn's sentiment at our first festival. Yes, Gentlemen, it is intelligence and industry, that makes men great. It is the intelligence, industry, and perseverance of our people, that has made Massachusetts and New England great in the history of our country, and it is to these cardinal principles we must ever look for the prosperity and advancement of our Society. Massachusetts was first in the field, for the development of the independence of our

country, and first in the field for the suppression of the late rebellion. Massachusetts has been a leader in the great benevolent enterprises of our day, and it was fitting and proper that the Massachusetts Horticultural Society should have been the great pioneer in the advancement of herticulture and kindred arts.

To the influence exercised by this Society may be traced the great improvement in our gardens and orchards, and in the rural embellishment, not only of New England, but other parts of our country. From the Massachusetts Horticultural Society emanated the establishment of numerous kindred associations. And may I not say, with becoming diffidence, that from this Society, also, originated the idea of our National Pomological Society, now exerting a most happy influence throughout our land.

But I must close. Go on my friends with increasing zeal and industry, let our past history and success excite you to renewed efforts for still greater excellence, ever remembering that for the highest attainment we must depend on the culture of the mind, as well as the culture of the soil:—

"Survey the globe through every zone,
From Lima to Japan,
In lineaments of light 't is shown
That CULTURE makes the man.
All that man has, had, hopes, can have,
Past, promised, or possessed,
Are fruits which CULTURE gives, or gave,
At incustry's bebest."

Mr. President, I am admonished that I have already occupied too mach time, and will conclude by offering as my sentiment:

The President of the Massachusetts Horticultural Society.—It was his mission to lead in the beautiful art of cultivation. Worthily and well has be fulfilled it.

At the conclusion three cheers were given for Mr. Wilder.

The President then gave the following:

Bolany,—that pleasant study which makes us familiar with every plant wherever we go, clothing every field with companions and friends.

Professor Russell responded to this sentiment, and we only regret our inability to find room for his remarks. He gave the following sentiment:

The Massachusetts Horticultural Society's last Seedling, just about to be "let out" to the public. It has proved true, under the culture of the "Author of the Fruits of America," to what it promised, when many years since it was so clearly Dear-born.

Other toasts were given and numerous speeches made, by Messrs. J. F. C. Hyde, W. C. Strong, S. H. Gibbens, and other gentlemen present, and the meeting broke up at a seasonable hour, all delighted with the prevalence of so much harmony and enthusiasm.

Oct. 4.—The stated Quarterly Meeting of the Society was held to-day,—the President in the chair.

The election of officers for the ensuing year took place to-day, and the following gentlemen were unanimously elected:—

President-Charles M. Hovey.

Vice-Presidents-J. F. C. Hyde, C. O. Whitmore, W. C. Strong, H. Hollis Hunnewell.

Treasurer-William R. Austin.

Corresponding Secretary-Samuel H. Gibbens.

Recording Secretary-F. P. Denny.

Professor of Botany and Vegetable Physiology-John L. Russell.

Professor of Zoölogy-J. W. P. Jenks.

Professor of Horticultural Chemistry-A. A. Hayes.

Executive Committee—The President, Chairman; The Treasurer, Marshall P. Wilder, J. S. Cabot, Joseph Breck.

Committee for Establishing Premiums—Chairman of Committee on Fruits, Chairman; Chairman of Committees on Flowers, Vegetables and Gardens, and Parker Barnes.

Committee on Finance-Josiah Stickney, Chairman; Marshall P. Wilder, C. O. Whitmore.

Committee on the Library—Francis Parkman, Chairman; W. H. Spooner, Jr., G. W. Pratt, R. McCleary Copeland, L. Wetherell.

Committee on Ornamental Gardening—II. H. Hunnewell, Chairman; W. C. Strong, H. Weld Fuller, Parker Barnes, Chairmen of Committees on Fruits, Flowers, and Vegetables.

Committee on Fruits-J. F. C. Hyde, Chairman; J. S. Cabot, W. C. Strong, P. B. Hovey, E. A. Brackett, Fearing Burr, Jr., D. T. Curtis.

*Committee on Flowers—E. W. Buswell, Chairman; J. C. Hovey, James McTear, C. H. B. Breck, Geo. Craft, F. Parkman, S. H. Gibbens.

Committee on Vegetables—Abner Peirce, Chairman; James Nugent, George Hill, B. Harrington, Joseph T. Walker, R. M. Copeland, C. N. Brackett.

Committee on Synonyms of Fruit—Josiah Stickney, Chairman; Benj. P. Cheney, C. M. Hovey, J. S. Cabot, Chairman of the Committee on Fruits.

Committee on Publication—Corresponding Secretary, Chairman; Recording Secretary, E. A. Brackett, Chairmen of Committees on Flowers, Fruits, Vegetables, and Gardens.

Forticultural Operations

FOR NOVEMBER.

FRUIT DEPARTMENT.

The month of October has continued rather dry, only one rain in any remarkable quantity having fallen. The temperature, without being cold, has yet been rather low, with the first frost on the 3d, rather light, but heavier on the 6th; since then the lowest has been 26°. The dry weather

has allowed a fine opportunity to get ground ready for planting, and as more rains may be expected trees will have the advantage of the moisture after being set out. Improve the opportunity to do everything possible to forward such work as can be done in the autumn.

VINES, in early forcing houses, will now begin to show their blossoms, and a higher temperature should be kept up, with less moisture, and air in moderate quantity in good weather. See that the border is well covered with manure, and, as the frosts become more severe, well covered with old litter, leaves, or anything that will retain the warmth in the soil. Upon this much of the success depends. Vines in graperies will now be at rest, and will require no care until the time for pruning. Vines in cold houses should be neatly pruned, and, as soon as the cold is severe, laid down and covered with leaves, or what is perhaps better, with the soil of the border, as this does not harbor mice, which often do much damage to the vines. Hardy grapes may be pruned this month, and laid down before the ground freezes hard.

ORCHARD-HOUSES should have an abundance of air, night and day, closing up only in wet or very severe frosty weather. Protect the earth by covering the pots to the depth of three or four inches with dry leaves.

TREES, intended for the orchard-house, n.ay, if convenient, be wintered in a warm shed, or cool, light cellar.

STRAWBERRY BEDS should be cleared of any weeds, the walks hoed, and all will be ready for covering next month.

PEAR, and other fruit trees, may be transplanted this month.

CURRANTS, RASPBERRIES, &c., may be transplanted.

INSECTS should be looked after. The canker worm grub will soon begin to run up the trees, and they should be well protected with tar.

TRENCH and prepare ground intended for planting next spring, draining, if necessary.

TLOWER DEPARTMENT.

As the weather becomes cooler, with sharp frosts, all the plants, which are likely to suffer, should be placed in frames, and protected with sashes, boards, or a covering of leaves. Many greenhouse plants do better in a frame, until the middle of November, if well protected from frost.

CAMELLIAS will now begin to swell their buds, particularly when the house is kept rather warm. They should have an occasional syringing in good weather, and carefully watered at the root. Wash and clean the foliage, if the plants require it.

AZALEAS will be at rest at this season, unless placed in a warm-house. This is the season to tie them into shape, when fine specimens are wanted. Water carefully, keeping the plants properly moistened, but not wet. Syringe occasionally.

PELARGONIUMS, potted off last month, and removed to a frame, or the house, should now have a place near the glass, and have the top shoot pinched off, so as to make bushy specimens. Keep the plants abundantly aired, and rather dry.

CHRYSANTHEMUMS should be freely watered, using liquid manure occasionally.

HYACINTHS, NARCISSUS, CAOCUS, and other bulbs, for early blooming, may now be potted and placed in frames, where they can remain till December, and then brought into the house to bloom.

ACHIMENES AND GLOXINIAS may be placed away on a dry shelf, beneath the stage.

CHINESE PRIMEOSES may have a shift now, into larger pots, and a good airy situation, near the glass.

HEATHS should be kept in a frame as long as the weather will admit, as nothing is more injurious than strong fire heat.

BEGONIAS, where there is not sufficient heat to keep them growing well, may be put away on a shelf, and kept rather dry, till the time for shifting, in February or March.

BEDDING GERANIUMS, taken up and potted for spring planting, should be kept cool and dry until such time as it is intended to start them into active growth.

VERBENAS, PETUNIAS, and other bedding stock, may yet be propagated, if not already done.

ALLAMANDAS, DRACENAS, and similar plants, may be kept in a warm part of the greenhouse, and very sparingly watered.

MONTHLY CARNATIONS, coming into bloom, should have a good place, near the light, and young stock, just potted off, may be kept on a cool, dry shelf.

CYCLAMENS, recently potted, will do best for a time in a frame, where they can be protected from rains and frosts.

Pansies, for winter blooming, should be potted immediately, and have the protection of a frame till well established.

Roszs, taken up from the border and potted, should be placed in a warm frame until new roots are formed, when they may be hardened off, and kept cool and dry for the winter, or brought into the house to bloom.

DEUTZIAS, SPIRZAS, WEIGELIAS, and similar plants, for forcing in winter, should be taken up and potted, and placed away in a cool part of the house.

CINERARIAS AND CALCEOLARIAS may now have a shift into larger pots, and a good place on a shelf, near the glass. Fumigate, if the green fly appears.

FERNS will now have partially stopped growing, and where the room is limited they may be allowed to remain dormant for a while, by keeping rather dry. If fine specimens are wanted, repot, and keep in a warm house.

ORCHIDS should now be kept rather dry, and moderately cool, a temperature of 60° being ample for all, except the India sorts.

Look over and repot all plants which require it. Prune and tie in such things as Kennedias, Sollyas, and other running plants. Give plenty of room to blooming specimens. Air liberally, and fumigate for the green fly or thrips.

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And to facilitate the labors of cultivators, a

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PRINCE DE LIGHE

> No. CCCLXXII. DECEMBER, 1865.

EDITED BY C. M. HOVEY,

AUTHOR OF THE FRUITS OF AMERICA.

HONORARY MEMBER OF THE HORTICULTURAL SOCIETIES OF CINCINNATI, NEW HAVEN, NEW BEDFORD, WORCESTER, ROCHESTER, BUFFALO, CLEVELAND, WILMINGTON, BTC. ETC.

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REVIEW OF THE GRAPE CROP.

EXPERIENCE is the surest guide to the culture of our best fruits, and usually every year adds something to our fund of information, by which we form a better estimate of their real merits. With the grape, however, it can scarcely be said we know but little if any more than we did a year ago. The season has not been favorable. Though dry, almost beyond precedent, still the mildew and rot have prevalled to a great extent, and the latter has, in some localities, destroyed nearly the whole crop.

It has heretofore been stated, by various cultivators, that the great cause of mildew and rot has been owing to our wet summers; yet, with one unusually dry, these maladies have prevailed to even a greater extent than in the wettest season. To what cause, then, must the mildew be attributed? For, if we are to alleviate its injurious effects, we ought to know when to apply the remedies. Certainly the present year fully proves that a dry summer is quite as fatal to the grape as a wet one, and that there are some causes, besides moisture and dryness, which bring on mildew and rot.

Moisture or dryness alone cannot, therefore, be considered as the cause of mildew; and if not these, then we must look to temperature, as being the probable source of mischief, and here we have some data, ascertained by close observation, to show that it is owing much more to changes of temperature than to moisture or drought. We have never so closely noticed the growth of the grape, in the open air, as during the past summer. Having a very large quantity of young vines under cultivation we watched them more closely than usual, on account of the weather, fearing they would suffer from the long-continued drought. They were planted out in the early part of June, and with careful watering, and other good treatment, began to grow vigorously towards the last of the month. We now considered them as well established, and that moderately dry weather was more favorable than

too much rain, and that they would need no further attention.

About the second week in July the weather was very warm during the day, but quite cool at night, and the waterings were discontinued, as we thought we detected some mildew. On the 14th and 15th of the month the thermometer fell as low as 41°, and many of the kinds received a sudden check, with more mildew. Subsequently, however, with frequent gentle syringings, and other care, they recovered their growth, and made strong and vigorous vines.

It was just at this time that our attention was attracted to the Concord grape, an old vine of which was growing against a house, facing the north-west, with the sun upon it less than half the day, and bearing annually a bushel or two of fruit. We found the berries in a sad condition, more than two-thirds of them almost black with rot, which soon after began to fall off, and at the usual period of ripening not one perfect bunch remained upon the vine, and the whole crop was not worth gathering. Other varieties we did not have in bearing, except a Delaware, on the opposite side of the house facing south-east. This did not suffer in the least, and the vine produced the usual small crop of very excellent fruit.

It might be asked why the Delaware did not rot like the Concord: but this we cannot answer. All we can do is to offer our theory of the cause, which may pass for what it is worth. In the first place the Concord, always a vigorous grower, had been accelerated in its vigor by the warm and showery weather of the early part of June, and this rank growth, in its half-sunny aspect, was overtaken by the almost frosty nights of July, directly exposed to the cold winds from the north-west, which, acting upon the tender skin of the berry, suddenly checked the growth, and the rot was the Not so with the Delaware; this not over vigorous vine at any time, with its spare branches and small foliage, exposed to the full sun nearly all day, had its wood more mature, and was less susceptible of injury. It was entirely sheltered from the cold winds by the high building, and the warmth gathered by day was undoubtedly a material aid to the vine, moderating the cold damp of the night. Whether,

however, this is a satisfactory solution of the trouble our readers must decide.

Unfortunately the rot has prevailed extensively throughout the country, in many localities where there has been but little if any mildew. On all the vines which we have examined in several collections, we have invariably found the best fruit upon those facing the east or south. We do not, of course, consider a north-west aspect a favorable one; not so good, certainly, as an open trellis. Yet we have never known the rot to attack the Concord in our grounds, in the same locality, before.

We have seen it somewhere stated that the rot could not be attributed to the cool nights and hot days, for we always have them during the summer. But this we do not admit. Having kept a record of the weather for upwards of thirty years, we find it very rare, indeed, to have so low a temperature as 42° in July. Any one who has ever grown the foreign grape in a grape-house well knows that a few nights, with the temperature at 42°, when the grapes are rapidly swelling, with a sharp wind, will mildew any grape; and if it is so in the house, we do not know why it should not be so in the open air.

We, however, give our views, perhaps untenable, but worthy of some consideration. With a warm and dry summer the grape crop has been much poorer than in the wet one of 1863. Some kinds, in some localities, have done remarkably well, and larger bunches, or better ripened berries, we never saw. Union Village and Rogers's No. 4 and 15, which did not ripen in 1863 or 1864, matured well this year. But as a conclusion of this brief record we add the following notes upon such kinds as we have particularly noticed:

ADIRONDAC.—We know of only one bearing vine in our neighborhood. This was set out in the spring of 1864, grew six or eight feet, and notwithstanding ten or twelve good layers were taken from the vines this year, it produced six bunches of beautiful grapes, not large, but fully ripe, as early, or earlier than the Hartford Prolific. It was affected scarcely any with the mildew or rot. Exposure south-east upon a trellis against a high fence. The year's experience entitles it to the first place among our hardy grapes.

REBECCA.—This has been apparently a favorable year for this fine grape. No mildew to speak of, and it has matured quite as early as the Delaware, attaining that rich amber tint which it has not done in some previous years. It plainly shows that it prefers a warm summer to bring out its high character.

ALLEN'S HYBRID.—Not so good this year as last; bunches smaller, and color greener. It certainly suffered at the same time and probably from the same cause as the Concord. There was no rot, but some mildew. It is, however, a superb grape.

CREVELLING.—This grape is increasing in popularity. While it is scarcely any earlier than the Concord, and not so large in the bunch, it has a brisk and more spirited juice than that variety. It is a less rampant grower, and did not suffer from rot, though there was some slight mildew of the foliage, but not of the fruit.

Delaware.—Not so good as last year, though occasional specimens have been exhibited of great excellence. They have ripened a week or more later than usual, and have not had that clear, rich, deep wine color, so characteristic of this sort. The rot has not affected it, but the leaves have mildewed slightly. It has, however, stood well among the various sorts, and, though not so good, has been a pretty sure crop.

HARTFORD PROLIFIC.—Generally very good, though inferior to 1864. Very little rot, and but slight mildew, but from some cause, perhaps dry weather, the bunches and berries were smaller than usual.

Union VILLAGE.—This has been very fine, indeed, we have never seen bunches larger, and as handsome—as it has been said—as the Hamburg. Though rather late it is a hand-some and sure crop, even if not fully mature.

ROGERS'S No. 4.—This, judging from one favorable locality, when grown on a trellis against a high fence facing the south, has proved better than we have ever seen it; in fact, we never have before tasted it fully mature. This year it was o, and the berries large, as black as sloes, and very good. In warm summers it may do well, and prove valuable.

ROGERS'S Nos. of various kinds we tasted in bearing at Col. Wilder's in September. We did not make any note of several kinds that we tasted, all nearly or quite mature, but Nos. 3 and 19 appeared well, and are worthy of further trial. Without being of high character, their size, vigor and productiveness, may make them valuable in many collections.

Framingham.—Three or four clusters, on vines set out as late as June, ripened earlier than Hartford Prolific, quite as good, and with larger bunches. It is a most vigorous grower, equalling the Concord, and when well established will show its good qualities better.

IONA, ISBAELLA, and some other sorts we have not fruited. A few specimens of the Iona have been exhibited as early as September 19th, and they were quite ripe, and fully sustain the high character of this very superior grape. Both are vigorous, though not rampant growers.

DIANA.—This, often subject to rot, has been much more affected this year than usual. Very few good specimens have been exhibited. It is to be regretted that a grape of such great excellence should have a single fault. It evidently wants a more sheltered location (such was the original one where it grew from seed) where it will not feel the alternations of heat and cold, and it will repay any extra attention.

Some other sorts might be enumerated, but these are such as we have fruited ourselves, or seen with grape cultivators around Boston, and we give these results from the limited locality under our observation. They will serve to show what are the results of an unexampled year.

CONCERNING COUNTRY RESIDENCES.

BY REV. A. D. GRIDLEY, CLINTON, N. Y.

WE do not propose to speak, just now, of the house and home of the ordinary farmer, who conducts all his operations for the simple object of gaining a livelihood; nor the dwelling of the villager, who owns a neatly painted "box" on the thickly settled street. But rather, the residence of a gentle-

man outside of city or village, be he farmer, or tradesman, or retired citizen, who lives in the country from choice, who makes country life attractive, who is drawn to it by his sincere love of rural beauty, and the refined pleasures of country life.

The tendency with the majority is in another direction. They cannot bear the quietude of the country; they want the excitement which comes from the conscious presence of a multitude, and from the stir and din of crowded thoroughfares. They love the show and brilliancy of the city, "the sweet security of streets," the smooth and clean side-walks, the gas-lights, and other comforts and luxuries which belong to town life. And even the villager, whose house and shop or store are hard by the post-office, church, hotel or rail-way station, affects a degree of pity for those who live a half mile or more "out in the country."

Yet it is not so with all. Not a few, and they persons of real refinement and education, feel a sort of healthy disgust for the effeminate life of the city; they do not like to breath its tainted air, to hear its perpetual racket, to be the victims of its frequent excitements, to be subject to its many restraints of law and custom. They love independence, and freedom and ease. They have an inherent instinctive fondness for rural life; for the various operations of farming and gardening, for trees and flowers and fruits; for fine horses, and oxen and sheep, poultry and dogs. They like to come in contact with the simple, unaffected inhabitants of the country, and to be the means, also, of stimulating and helping them in every good word and work.

For one who looks only at personal or family dignity and true gentility, it is in country life that he will best find it. The man who lives in the city is swallowed up in the crowd. He is only Mr. Smith, or Mr. Jones, living on such or such a street, at such a number, only one of twenty or a hundred thousand others around him. Whereas, if he lived on a country-place, with some amplitude of means, he would be known through all the region around, as the proprietor of the fine residence overlooking the town or village, and respected by all its inhabitants. Yet, to be truly happy in the country, one must really love it for its own sake.

The English understand this matter very well. Their best people of all classes live in the country. Men whose business or professions confine them to the city for a time, no sooner acquire a competence, than they hie to the country, and surround themselves with the comforts and attractions of a rural residence. In the time of James I. some of the gentry took up their abode in the city, that they might enjoy more of the luxuries attending court-life. Their king was wont to dissuade them from this practice, advising them to go back to their country-seats. "Gentlemen," he would say, "at London, you are like ships at sea, which show like nothing; but in your country villages, you are like ships in a river, which look like great things." The gentry need no such royal advice now-a-days.

Our own country has now, and always has had, those who prefer rural to city life. Among eminent men, the mind at once reverts to Washington, on his country-seat at Mt. Vernon; to Jefferson, at Monticello; to Adams, at Quincy; to Webster, at Marshfield; and Clay, at Ashland; Irving, at Sunnyside, and many others. And among others in the walks of private life, there are multitudes in every part of the land who love the comparative simplicity, independence, and freedom of the country, above anything that the city can give them. The Hudson river is lined with their residences; the region around Boston is full of them. The shores of many of our cities and large towns, are fringed with them.

Such facts go to show that the love of country life is a natural growth among us, and is not dying out. May it thrive and prosper, more and more! Let us see families, more and more, every year, removing from our cities to the country, attracted to it by an unconquerable love, willing to give up a few luxuries and soft refinements of the town, that they may enjoy the simpler and purer joys of the country, and may train up their children in circumstances more favorable to their health, happiness and morals.

FOUR GOOD AUTUMN PEARS.

BY D. W. LOTHROP, WEST MEDFORD.

If the question were publicly asked, which is the best pear, all things considered, there can be but little doubt that, among fruit-growers and fruit consumers, it would be pronounced the Bartlett. It has never been over-praised. But if the question were to be put, which were the best two. the answer would be more varied; and as we increased the number, the response would pass into greater diversity. Hence it is impossible to decide absolutely what are the best three, six, or dozen pears now under cultivation. We have different experiences and different estimates not only of fruits, but of men, cattle, horses, and in fact of every thing else; and this opinion is more or less changeable. But on the question what are good pears, and worthy of cultivation, we should meet with much more unanimity. course, in the multiplicity of new varieties of high excellence, as is now the case many older ones will lose their comparative value, and be set aside. So great is the number of the former, that the time is beginning to approach when none but those of the greatest merit will be cultivated, and these will stand in flavor, if not in beauty and vigor, at the most possible advance in pear culture.

Perhaps no fruit has so great a variety of flavor, or so extended a compass of quality as the pear—nauseating and bitter as the waters of Tamah in some cases, and approaching nectar in others. Van Mons found this diversity in his seedlings. We taste sugar in the Lawrence, and molasses in the Belle Lucrative! Others, like Swan's Orange and Beurre Superfin, have a commingling of delicate vinegar. Still others have a different quality of acidity mixed with their sweetness, and are said to be brisk, spirited or vinous. Many possess a fine spicy aroma. In that excellent pear the Andrews, may be noticed the delicate perfume of newly-cut hay, which in September carries one agreeably back to the freshly mown fields of June.

At present, only four varieties will be noticed, all of which are considered worthy of general cultivation, while the quali-

ty of two, at least, is usually pronounced best. These pears are commended, not to those who have them and know them, but to those who have them not. Critical descriptions are not intended.

BEURRE D'ANJOU.—This variety has been growing in public favor for the past ten years or more, without disappointing any one, and in its season is hard to be rivalled. So rapid a grower is it that scions of two years' growth, set on vigorous stocks of one or one and a half inch diameter. will form a large top and bear quite full. In this respect, I have had no pear that equals it. For orchard culture it is well regarded, as it is not over fastidious as to treatment. Unlike most pears, it generally fruits on last year's terminals, which causes the tree to spread and weep-a habit that, coupled with its showy fruit, makes the tree very attractive, The size of fruit is and tends to give larger specimens. large to very large, and its quality rather sweet, moderately sprightly, with an exceedingly buttery or fatty pulp, without the least astringency. But before eating, the fruit should be quite mellow, and then they are usually of a pale green hue, . (sometimes of light straw) with a little reddish-brown coloring on the sunny side. Very much of their goodness is lost unless well ripened, and there is no danger of their passing into mealiness, as they show plainly the progress of their decay. They ripen gradually, and are in eating during October and November. But much depends upon the season, position of tree, and culture. The past season many were fully ripe on September 20th. Some place it in Decem-The d'Anjou, in short, is a noble fruit, a great acquisition-and seems to have only one fault as a market fruit, and that is a lack of high color. It is said to do equally well on either the quince or pear root.

SWAN'S ORANGE.—This large American variety has heretofore had its share of praise, but of later years it has not attracted a great deal of attention. It will not, however, be lost in obscurity. The tree is a strong, healthy grower on its own roots, and bears sufficiently well for so large a pear. When ripe, its color is a deep yellow, and its slight acidity is not disagreeable to most palates. On a warm soil, as with the writer, it also develops sufficient sugar to make it excellent. Mr. Rivers says that in England it is "always sour." This we should expect from her humid climate. With us we can hardly conceive of its being second rate, except in damp seasons or on cold soils. It should be planted in a warm position. Generally it does not seem to be a tardy bearer, but this is somewhat dependant upon treatment. It is tender, juicy, and spirited; keeps well, and never cracks. Must take a place beside the Duchesse and d'Anjou; while on some accounts it is preferable to that well-known autumn pear, the Beurre Diel. Though lacking the exquisite delicacy of some varieties, its many good points will commend it not only to the amateur, but to the market grower.

THE LAWRENCE.—This variety is one of the most delicate we possess—its color, in its best specimens, being a beautiful clear straw (a rare sight in early winter), and its quality juicy, sweet and honeyed, without any astringency, though rather firm in flesh. This season they are ripe now, the first of November-the result of a dry summer, which must have been capable of bringing up the most tardy. The Lawrence, however, will usually keep till January. They easily ripen in barrels, in the cellar, covered or kept from the light. In this way they color well, but do not seem ever to get very mellow. But this we forget in eating. The growth of this variety is so steady and vigorous, with but ordinary care, the tree so handsome in appearance, and the fruit so beautiful and valuable for the market, that it would be remarkable if it were not a favorite wherever introduced. It is not known, I think, to possess a single bad habit.

DOYENNE' BOUSSOCK.—This is a foreign pear of rather recent introduction, and was fortunate enough to be one of the twelve commended by a party of the most eminent fruit-culturists in the vicinity of Boston, members of the Mass. Horticultural Society. Nevertheless, it is sometimes disparagingly spoken of. Some of the smaller and poorer specimens may lack flavor, but the largest and best are very tender, exceedingly juicy, and sweet and refreshing like a watermelon. The fruit sets and starts with great vigor in the spring, and grows as large as the Flemish Beauty, coloring up at

times to a light straw. It then presents a rich appearance. The tree is vigorous and stocky in growth, and a heavy bearer. Ripe about the last of September, sells well in market, and is a good orchard pear.

HYBRID GRAPES.

BY JACOB MOORE, ROCHESTER, N. Y.

THE hybridization of the native with the foreign species of grape is now attracting considerable attention. Having raised a number of good varieties in this way, I herewith furnish a description of them, for the perusal of all those interested in the subject. These were in every case produced from seed of the native kinds mentioned, and, it is necessary to add, are the same varieties exhibited at various pomological societies as from Moore Brothers, Rochester.

CLOVER ST. BLACK.—From the Diana, by Black Hamburg. Clusters large, about the size of Concord, compact, regularly shouldered; berries large, roundish, black, overspread with dark violet bloom; flesh tender, sweet and excellent, somewhat similar in flavor to the Hamburg, but livelier and wholly devoid of the offensive musky taste of the Diana. The vine is a moderately vigorous grower with broad leaves, as thick or thicker than the Delaware, smooth underneath; hardy and productive, and the fruit ripens with the Concord or earlier. Bore this season for the first time, and was fully ripe by the middle of September. Very promising.

CLOVER ST. RED.—Same origin as preceding. Clusters larger than the Diana, loose, and occasionally with a similar long branch (or shoulder) appended to the top of the bunch. Berries large, roundish oval, crimson when fully ripe, with a lilac bloom; flesh sweet to the centre, tender, juicy, with a slight Diana flavor, but richer and more sprightly. The vine is a rapid grower, shoots large and leaves thick, hardy and productive. The fruit ripens same time as the Diana, rather

too late for this section usually, unless in very favorable locations.

DIANA HAMBURG.—Same origin as preceding. This is generally considered the best grape of the collection. Clusters very large, six to eight inches in length, usually longer in proportion to breadth than the Hamburg, regularly shouldered, compact; berries roundish, larger than the Concord, dark crimson, with a rich purple bloom, mingled with a fiery lustre in the sunlight; flesh perfectly tender, breaking to the centre and letting out the seeds like a foreign grape, of sugary sweetness, in flavor remarkably like the Hamburg, but more aromatic and lively, fully equalling that excellent variety. The vine is a slow grower, making firm, short jointed shoots, with large buds and deeply lobed leaves of medium thickness, peculiarly crimped and often rolled inward. Hardy and very productive. Fruit ripens just after the Concord, and at least a week or ten days earlier than the Diana.

MOORE'S HYBRID.—Also of the same origin. Clusters broad, regularly shouldered, similar in shape to the Hamburg, compact; berries roundish, the size of the Concord, dark purple, with a violet bloom; flesh tender, very sweet and delicious, nearly equalling the Diana Hamburg in flavor. Vine a rapid grower, the shoots large, firm, and leaves thick; hardy and productive. Fruit ripens same time as Diana Hamburg or earlier, and the clusters are probably equally large; but this cannot be decided upon with certainty, as this is the vine's first season of bearing. Very promising.

WHITE MUSK.—From the Isabella, by Royal Muscadine. Clusters and berries of the same shape, and nearly as large as the Isabella, but of a yellow color; berries filled with juice, the flesh being of the slightest possible consistence, semi-transparent, showing the seeds, very sweet and delicious, with a slight muscat flavor. Vine a rapid grower; shoots light colored; leaves thin and deeply lobed; hardy and very productive. This variety requires a shaded situation on account of the liability of the leaves to sunburn.

Last year the White Musk was of delicious flavor; but this year it was quite insipid, on account of the foliage being so badly sun-burned. It requires farther trial in order

to decide fully upon its merits. I have some other hybrids, but none that equal those described, and shall therefore not disseminate them. Most people are greatly in error, with regard to hybrids, naturally supposing them not hardy, but facts prove the contrary. Rogers's Hybrids are hardier than Isabella and Catawba: Allen's Hybrid is hardier than its native parent, the Isabella; Norton's Virginia is as hardy a grape as any known; also, my own hybrids are as hardy, and some of them more hardy than the native varieties which produced them. The fact is, hybridization has the effect of hardening the wood of seedlings so produced, rendering them capable of withstanding severities which neither of the parent varieties could endure. This is not so with every hybrid seedling, of course, but it is my experience that four or five, out of as many as twenty-five, are perfectly hardy. I find that, with hybrids, some seedlings most resemble the foreign parent, such being generally worthless for out-door culture; others are more similar to the native parent. and others a medium between the two. I speak now of the vine itself, not of the fruit. The best seedlings are among the mediums, or those most resembling the native parent. Such is my experience.

In conclusion, it is my belief that, through hybridization alone are we ever to obtain varieties equalling the foreign grape in quality, yet adapted to our climate.

We are pleased to publish this account of Mr. Moore's experience in the production of hybrid grapes, and hope his success will encourage others to make similar attempts at the production of new varieties, for we quite agree with Mr. Moore, that it is through "hybridization" that we shall probably achieve much greater results, than from accidental, or chance seedlings, or from even the selection of the best varieties. Having already giving a brief account of some of Mr. Moore's grapes, we need only state that his experiments are of great value, showing as they do that hybrids between our native and foreign grape are easily produced by due attention to fertilization.

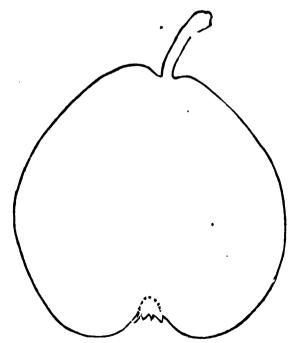
DESCRIPTIONS OF SELECT PEARS.

BY THE EDITOR.

WE have quite a number of drawings of new pears, several of them seedlings of considerable merit, which we shall figure and describe in our next volume. We now add those which have fruited in such condition as to enable us to judge more fully of their merits.

237. GANSEL'S LATE BERGAMOT.

This pear (Fig. 13) is one of the numerous scedlings of Mr. Williams of Pitmaston, England, some of whose pears we



13. GANSEL'S LATE BERGAMOT.

have already noticed, (p. 44). It has now been in our collection some years, and first bore with us a year or more ago, but the specimens were few, and did not ripen up well, so that we did not form a very high opinion of its merits. It is

slow in coming into bearing, our trees being very large. Fortunately it has fruited in some other collections, so that its qualities are now ascertained. We have before us a letter from the Hon. J. M. Earle of Worcester, which came with a very fine specimen of the pear, from which our drawing and description are made; it is as follows:

Worcester, October 31, 1865.

CHARLES M. HOVEY, Esq. Dear Sir:—Prostration on my bed from a severe illness induces me to confide to you, what I had intended to do myself, the description and drawing of "Gansel's Late Bergamot," for your excellent Magazine.

It is a pear which ought to be universally known, coming fully up to the European recommendation of its character; and is, in my estimation, one of the best fruits we have acquired for the last twenty years, ranking as the full peer of the Beurré d'Anjou, the Sheldon, and the Doyenné du Comice. In quality it is vinous, high-flavored and fine, with the characteristics of its parent, the Gansel's Bergamot; but is a larger, finer growing, better bearing, and more surely ripening kind.

The tree is healthy and vigorous, somewhat spreading in its habit, with foliage resembling that of the Gansel's Bergamot, in its waved outline, and somewhat hoary appearance; though larger and more abundant; and is persistent to the last; remaining entire upon the tree this 31st of October.

This is understood to be a December fruit; but like all other winter fruits of this remarkable season, some specimens, when kept warm, have already ripened; of which the accompanying is one.

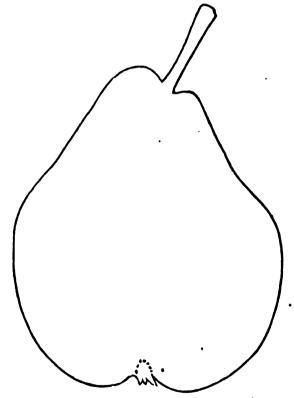
This fruit was raised at Pitmaston, Eng., by Mr. Williams, a celebrated fruit-grower, and not by Mr. Gansel, as erroneously stated in Downing's work.

Yours truly, J. M. EARLE,
By S. F. EARLE, Amanuensis.

We are much indebted to Mr. Earle for his kindness, which we doubt not will be appreciated by all pear cultivators. We add our own description.

Size, medium, about two and a half inches deep, and three

inches in diameter: Form, roundish oblate, depressed at the base and crown: Skin, fair, dull yellowish green at maturity, with a faint shading of blush on the sunny side, and thickly dotted with greenish specks: Stem, medium length, about half an inch long, moderately stout, fleshy at the base, and obliquely inserted in a small shallow cavity: Eye, open, and moderately sunk in a large, open basin; segments of the calyx, large, broad, long, tapering, reflexed: Flesh, yellowish white, coarse, melting, juicy, with much of the flavor of Gansel's Bergamot: Core, large, little gritty: Seeds, medium size, broad, and shortly pointed, brown. Ripe in November.



14. ALEXANDRINE DOUILLARD.

238. ALEXANDRINE DOUILLARD.

The only notice we find of this pear is an account of it in the report of the Pomological Congress of Lyons for the

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1859, given in our Magazine (Vol. XXVII., p. 219) when it was admitted as deserving the recommendation of the Congress. Our own trees have not fruited, but through the kindness of Epes Sargent, Esq., we have been favored with some fine specimens, which were large and well grown, and ripened up in perfection. Of the habits of the tree we can add but little; it is a good grower, and we believe does well upon the quince. We doubt not Mr. Sargent will favor us with some account of the pear, which is of good size, resembling in shape the Bartlett, and colors up of a fine yellow.

Size, large, about three and a half inches long, and two and three quarters in diameter: Form, pyramidal, or Bon Chretien shaped, largest about the middle, slightly contracted above, obtuse at the stem, with an uneven and slightly knobby surface: Skin, fair, smooth, deep yellow when mature, with delicate traces of russet around the stem, and covered with very small brownish red specks: Stem, medium length, about three-quarters of an inch long, rather slender, and inserted with scarcely any cavity: Eye, rather large, closed, and moderately sunk in a small furrowed, and not very deep basin; segments of the calyx, long, twisted: Flesh, yellowish white, little coarse, melting, buttery, juicy, sugary, and rich, with a pleasant aroma: Core, medium size: Seeds, rather large, broad, chestnut brown. Ripe in October.

GARDEN GOSSIP.

RESIDENCE OF DR. G. H. LODGE, SWAMPSCOT.—Nothing is more delightful than to get away from the heat and dust of the crowded city, and enjoy the fresh and invigorating breeze of the sea-side; and this pleasure is greatly enhanced, when, in addition to all the comforts of such a place, we have, also, all the enjoyments of an inland home. Such we found to be the residence of Dr. Lodge, situated at Swampscot, immediately upon the bay, the rocky boundaries of which, for many hundred yards, are washed by the ocean billows, and the broad

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expanse of water, whitened with a thousand sail, and dotted with the islands of the harbor.

Here, in a domain of some forty acres, where the Doctor passes the summer, he has spared no pains to obtain all the elegance of a country villa, by the sea-side. By a judicious selection of favorable spots for cultivation, and by the liberal plantation of trees for shelter, where there was originally none, he has been enabled to render a great portion of what was once a wild, rocky, and rough sea-shore, a fertile and beautiful garden. The house, which stands almost upon the ocean bank, is reached by a long and beautiful winding avenue until it opens upon the lawn, near the house. This avenue was originally a kind of natural pathway, and was laid out by the Doctor, and widened at much expense, coursing, as it does, among rocks which at times form almost abrupt sides; with such a foundation soil had to be brought to make the borders in which the trees were planted; but this was done so thoroughly that they have made a vigorous growth, and now completely shut out the grounds on either side. Hemlock and Norway Spruce are intermixed with all the well-known forest trees, forming a picturesque and elegant drive to the sea-side.

On the north of this avenue, in a hollow, sheltered on the east by a rocky cliff, is the Doctor's apple-orchard, which we found in the most beautiful condition, the trees all pruned by himself, are on precisely the same plan as Capt. Austin's pear-trees—the wine-glass pattern—and, what is remarkable, though of large size, still the system was kept up, each tree having 6 to 10 cordons, or main branches, and all the side shoots cut in. Upon our inquiring whether it was not a difficult task to keep down the summer shoots, the Doctor answered that it was, but so far he had mastered it. The trees were bearing but little fruit this year, and what there was was badly bitten by the curculio. The canker worm finds no place in the Doctor's grounds. We never saw such rich-foliaged and vigorous apple-trees.

On the other side of the avenue, in a similar situation, nearer the sea-side, but sheltered by a similar elevation of rocks and trees, we found the Doctor's pear-orchard, the

trees trained as pyramids, and looking very well, some of them full of fruit, but not so handsome as the apple-trees. Evidently the apple did better than the pear, though the latter was giving much the larger quantity of fruit. The sorts composed all the popular kinds, and some of the newer sorts.

Passing on, we came to a plantation of Concord grapes, which were trained to a fence facing the east, and growing on a kind of rocky ledge. These, however, looked well, and were bearing fruit. Various spots were devoted to vegetable culture, and by the aid of liberal manuring, in which fish forms a component part, the land has been brought to a degree of fertility almost beyond belief. A field of carrots, of an acre or more, was unusually fine. The Doctor pointed out to us his mode of using up the fish.

After two or three hours in rambling over the natural but picturesque portion of the grounds, and admiring some of the old trees found on the premises, such as the American Hornbeam (Tupelo), Swamp Oak, Maples, &c., which have been carefully preserved, and now surrounded with a verdant turf, we returned to the house to discuss fruits and fruit-growing, and enjoy the hospitalities which Dr. Lodge knows so well how to dispense. We left Swampscot, wishing that more of our sea-side residences contained so much that was interesting, instructive and enjoyable in so high a degree.

General Notices.

LILIUM AURATUM.—Since the publication of my note on the Lilium auratum, which flowered so finely here three weeks ago, I have had many inquiries respecting its treatment; and as they are far too numerous for me to answer separately, you will oblige me by publishing the following:—

I believe the secret of my success to have been paying great attention to the plant as regards water, and giving a moderate greenhouse temperature after flowering, thereby securing a very gradual decay of the leaves and stem, which is of much natural advantage to the bulbs. As soon as all signs of life had departed from the stem I kept the bulb in the coolest part of the greenhouse, being careful at the same time not to allow the soil

to become too dry, which may be guarded against by standing the pot on a damp bottom, so as to keep the roots slightly in action. It is one of the greatest mistakes possible to allow these bulbs to be entirely dried off during the winter. As regards soil, I use good fibry loam and peat in equal parts, with a good proportion of sand and leaf mould, after which I add cow or sheep dung dried and beaten up small, in proportion of one ounce to every two lbs. of the whole of the other soil. I never give manure water until the pot is filled with roots and the buds formed, and this is gradually withheld as the flowers expand.—(Gard. Chron.)

HINT TO ORNAMENTAL PLANTERS .- Your remarks on the utility of ornamental trees and shrubs of foreign origin call to my mind a very fine collection of Japanese plants, which was exhibited by John Knowles, Esq., Trafford Bank, at the late Exhibition of the Manchester Botanical Society. . Many of these were four feet high and three feet through, showing their use and beauty to much greater advantage than in a small state. Amongst them were Cryptomeria Veitchii, fully four feet high, and very bushy, with beautiful glaucous foliage. This cannot fail to form a fine feature in winter and spring, provided it proves hardy. Retinospora obtusa, as shown, had a fine pyramidal habit, which, however, does not seem common to this plant. Juniperus rigida, with fine pendulous branches, promises to make a good companion for the Deodora, while Thuja falcata, with close upright habit, seems specially adapted for forming bold divisional lines in a garden. Besides these there were also several others possessing great variety both of form and color, which must in a few years greatly revolutionize our present sytem of out-door decoration.—(Gard. Chron.)

OLD-FASHIONED PLANTS.—Some of your correspondents are moving in a right direction in making inquiry for certain of our old and missing plants. I have for years been advising nurserymen to get at work at them. Where are many of our old shrubs to be found? How many good things have been lost, or partially so, i.e., lost to the trade—put aside by new things. I am at present noting some of the old, old-fashioned trees and plants, and where they are to be found; and trust some one in the trade will take the matter up, for a landscape gardener has not the plants which our forefathers had to form his picture with; and although hundreds of new things have been introduced, the old have been neglected until one can only find about a score kinds of trees and shrubs in the majority of provincial nurseries. I will again revert to this subject.—(Gard. Chron.)

ACHYRANTHUS VERSCHAFFELTII (IRESINE HERBSTII.)—In spring I predicted that this would prove a valuable plant for flower-garden ornamentation, and all that I said in its favor has been fully realized. About 700 plants of it bedded out here have a more beautiful and effective appearance than pen can describe. During the hot dry weather Amaranthus melancholicus ruber bore off the palm. I have several thousands of the lastnamed plants that have been very effective this summer—hot dry weather

suits it; while the Achyranthus succeeds best in cooler weather, and in a more moist situation—indeed—it will thrive where the Amaranthus will not live. I have had it out in 10 degrees of spring frost, without its being injured in the least. We may therefore expect to see it in full beauty long after the Amaranthus has passed away, for should the weather continue wet we shall soon find that the Amaranthus will lose its beauty and die. Nothing can excel the fine appearance of this Achyranthus as now seen here.—(Gurd. Chron.)

Spirma Thunbergii.—I saw a specimen of this beautiful spring flowering shrub in full bloom a few days ago at Messrs. F. & A. Dickson & Sons, Upton Nurseries, Chester. It was about 2½ feet in height, and about 3 feet in diameter, and was literally covered with wreaths of snow-white blossoms. This is apparently still a scarce Spirma, inasmuch as it is seldom to be found in trade catalogues; and yet for purposes of spring decoration it is unsurpassed by any other of the genus. If gently forced, its long snowy wreaths of flowers would be invaluable in the conservatory, where, flowering very early, it would form a good companion to Deutzia gracilis. It is perfectly hardy, having withstood without injury the rigors of the past winter. The well-known double-flowered Spirma prunifolia flore-pleno is also highly effective at present at the nursery just named; the flowers are pure white, with a slight tint of green in the centre, and are formed in wreaths of from two to three feet in length. These are both Spirmas which deserve to be more common than they appear to be.—(Gard. Chron.)

Massachusetts Horticultural Society.

Saturday, Oct. 7.—At this meeting the following business was transacted: A Committee was appointed to prepare a petition to the Legislature, to prevent the ravages of the canker worm, caterpillar, and other injurious insects. William C. Strong, J. F. C. Hyde, P. Barnes, E. Wight, E. A. Brackett, and H. W. Fuller were chosen, and, on motion, the President was added to the Committee.

On motion of Mr. Strong a Committee was appointed to inquire into the habits and food of the robin, in order to ascertain if any means can be taken to prevent the destruction of fruit. The President, Dr. J. R. Brewer, Prof. J. L. Russell, W. C. Strong, Prof. Jenks, E. A. Brackett, F. Parkman, and H. W. Fuller were chosen.

C. O. Whitmore presented a motion to appoint a special Committee, with the President as chairman, to revise the By-Laws. The motion was adopted, and the President, C. O. Whitmore, F. Parkman, E. W. Buswell, and P. Barnes, appointed the Committee. On motion of Mr. Buswell, the thanks of the Society were voted the President for his Address at the Dedication of the new Hall, and a Committee of three chosen to request a copy for publication.

Col. Theodore Lyman was unanimously elected an honorary member. Adjourned one month, to November 4.

Obituary.

DEATH OF JOSEPH FROST. We are pained to announce the loss of Joseph Frost, of the firm of Frost & Co., Genesee Valley Nurseries, Rochester, N. Y., who died very suddenly, of apoplexy, at St. Louis, Mo., on the 26th of September, in the 35th year of his age.

The Rural New Yorker, in making the announcement, truly remarks, that his decease seemed to cast a gloom over the entire city, for all who knew him loved or esteemed him for his modest worth and manly virtues. Kind, affable, and generous—unobtrusive and retiring in his manners—genial in his nature, sincere in his friendship, and affable, and polite in his daily intercourse with others, all who knew him will learn of his death with sincere grief and regret.

Mr. Frost was well known as being connected with one of the most extensive nurseries in the country. He was at one time Horticultural Editor of the Genesee Farmer, and also a member of the Fruit Growers' Society of Western New York. Called suddenly away from the fond circle to which his attachment was ardent and unchanging, his bereaved family will have the sympathy and condolence of many loving friends.

DEATH OF SIR WM. J. HOOKER. This eminent botanist died-at Kew, on the 12th of August, in his 81st year.

Sir William Jackson Hooker was born in Norwich on the 6th of July, 1785. His father had a collection of rare and curious plants, which was well known amongst amateurs. He received his education at the High School of Norwich, and having inherited an ample competence he determined to devote himself to travelling, and to scientific pursuits. In 1809 he visited Ireland, which he extensively explored. In 1814 he made a botanizing expedition to Switzerland. His first botanical work was that on the English Jungermanne, which was completed in 1816. In 1820 he accepted the Regius Professorship of Botany in the University of Glasgow, where he resided for twenty years, during which period he published several valuable botanical works, and added annually to his extensive Herbarium. He was twice offered knighthood, but did not accept it till 1836; this honor was then bestowed on him by William IV., for the great services he had rendered to botany. In 1841 he was appointed to the Directorship of the Royal Gardens at Kew, where he remained till his death.

The Gardeners' Chronicle, from which we gather this information, gives a long account of the labors and improvements effected by Sir William while Director of the Gardens; but our space is too limited to copy. He was the editor of the London Journal of Botany, which embraced 17 volumes, and editor of Curtis's Botanic Magazine for the last fifteen or twenty years. His latest labors were devoted to the Ferns, in 3 volumes.

He was an LL.D. of Glasgow, D. C. L. of Oxford, a Fellow of the Royal Societies of London, Edinburgh, the Linnman, Antiquarian, Geographical, and other societies; a Knight of Hanover, Companion of the Legion of Honor, a Correspondent of the Academy of France, and a member of almost every other learned academy in Europe and America.

He leaves a widow, two married daughters, and one son, Dr. Joseph Hooker, who, since his death, has been appointed Director of the Kew Gardens.

Forticultural Operations

FOR DECEMBER.

FRUIT DEPARTMENT.

NOVEMBER has been a rather mild and favorable month, with but one severe storm of rain, and without snow. The thermometer fell to 18° on the 11th, but since then it has been much warmer, with very little frost. There has been scarcely a day but what gardening operations of the season could be most successfully carried on, and fruit trees could not have been planted in a more favorable condition of the soil.

VINES in the early houses will now be setting their fruit, and with the short days, little sunlight, and cold nights, will require considerable attention. Keep up a good day temperature, with sufficient air, but not too hot at night. Keep the border well protected from frost, snow and cold rains. Vines in the grapery and greenhouse may now be pruned and cleaned, in readiness for growing. Cover the border with four inches of manure, if not already done. Vines in cold houses should be laid down and protected, if not already done. Vines in the open air should be laid down and covered with earth.

ORCHARD-HOUSES should be well aired in all good weather, only closing them on very severe nights. See that the pots are well covered with leaves, or hay. Trees, intended to be brought into the house, may be wintered in the cellar, if desired.

STRAWBERRY BEDS should be covered with an inch or two of leaves, straw, or coarse manure.

RASPBERRY BUSHES should be laid down and covered with soil.

PEAR TREES should be well manured, making a conical heap around the trees.

TRENCH and prepare ground for spring.

PLOWER DEPARTMENT.

A few cold nights, in the early part of the month, came suddenly, and gave a slight touch of winter to the garden. It was rather severe on unprotected plants: but the milder weather which followed, gave ample time to prepare for December. Frames, yet containing plants, should be well covered with mats or shutters.

CAMELLIAS will now be in flower, and will require careful watering, keeping them neither too dry nor too wet. They should also be syringed in fine weather. Wash and clean the leaves, if not already done.

AZALEAS will soon begin to flower, if kept in a warm part of the house and freely syringed. Such as are wanted later must be kept cool, and rather dry, though they should not suffer for moisture. Take every lessure time to make specimens by tying the plants into good shape. Look out for the black thrip.

Pelargoniums will now be growing very slowly, and should have plenty of air to secure stocky plants. Keep cool, (not over 45° at night) and near the glass. Turn the plants round once a week. Begin to repot, both young and old stock, the last of the month, using the soil a little stronger than at the first potting.

CHRYSANTHAMUMS, as soon as they are out of flower, may be removed to a frame.

CINERARIAS should have a cool, airy place, near the glass. Repot, as soon as they require it, and look out for the green fly.

Frans should be carefully watered at this season.

MONTHLY CARNATIONS, that are growing vigorously, may have a shift into larger pots, though they do best rather under than overpotted.

GLOXINIAS, for early flowering, may be started into growth next month.

CALADIUMS, for early bloom, may be repotted next month. In the mean time keep them warm and dry.

BEGONIAS may be divided and repotted the last of the month.

IXIAS AND SPARAXIS, in pots, should have a good situation, near the glass.

HYACINTHS, and other bulbs, planted last month, and put into frames, may be brought into the house to bloom.

NEAPOLITAN VIOLETS, in pots, and protected in frames, may be brought into the house to bloom.

ALYSSUM AND MIGNOMETTE should be placed on a shelf, close to the glass.

FUCHSIAS should be pruned and repotted, in readiness for growing next month.

CYCLAMENS should be kept cool, and not too wet. They dislike heat.

AMARYLLISES should be kept dry until the bulbs show signs of growing. HEATHS should be kept in the coldest and most airy part of the house.

ORANGE TREES should be carefully watered at this season.

Improve all leisure time to keep the house neat, the plants tied up, pots washed, and every thing in good order.

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